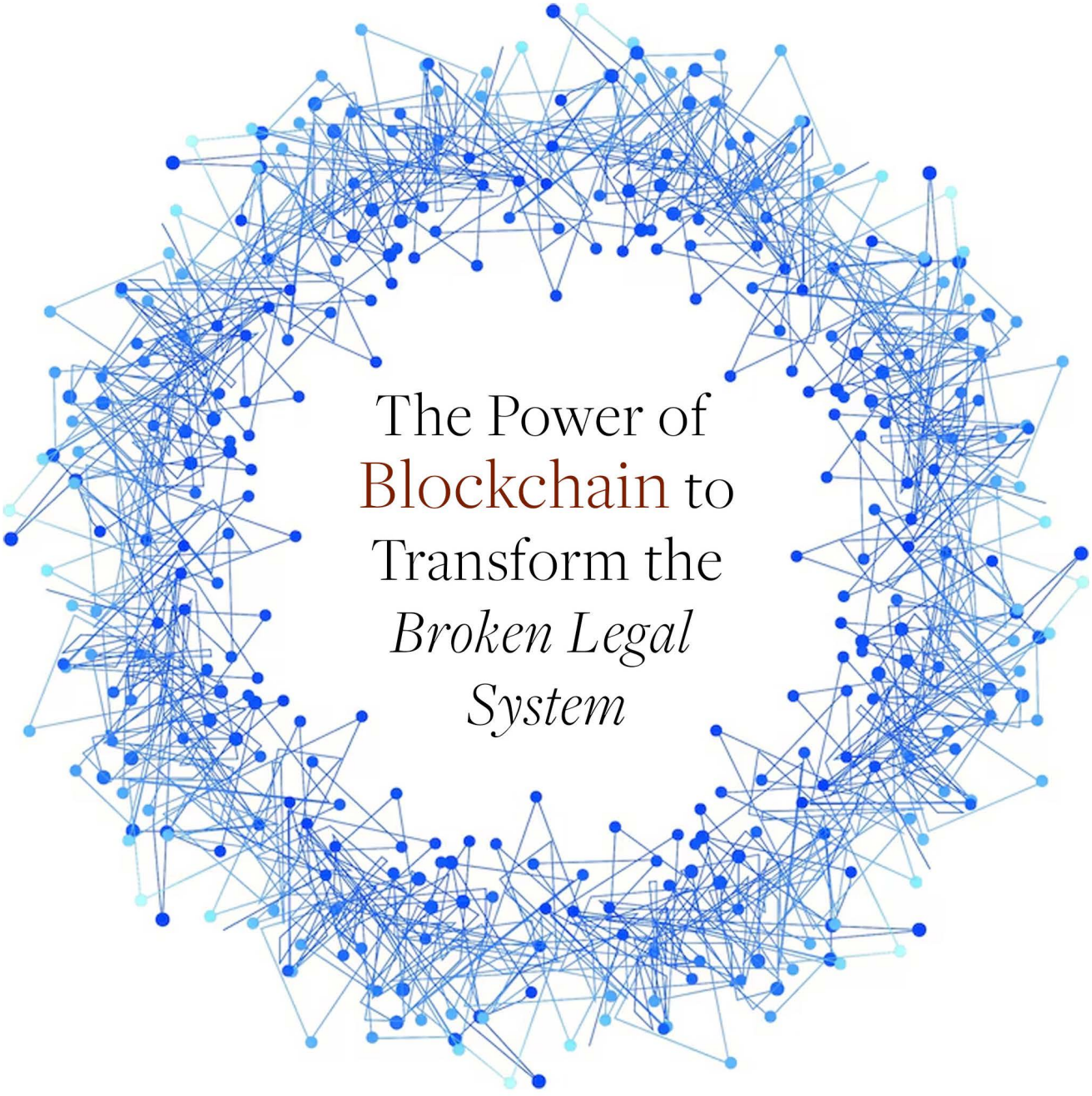
DECENTRALIZED LAW



The Power of Blockchain to Transform the *Broken Legal System*

WESLEY THYSSE

DECENTRALIZED LAW

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For my parents, Hans and Marian,
who stimulated me to read and think for myself.

The more laws and restrictions,
The poorer the people.
The sharper men's weapons,
The greater the chaos in the land.
The more knowledge that is acquired,
The stranger the world.
The more rules and regulations,
The greater the number of criminals.

Therefore the Master says:
I do nothing,
...and the people become good.
I seek peace,
...and the people take care of their own problems.
I do not meddle in personal affairs,
...and the people become prosperous.
I let go of all my desires,
...and the people return to the good and simple life.

~Lao Tzu (Tao Te Ching)

Foreword

> *"Men have sought for alternative social orders more often than they have tried to improve their understanding or use of the underlying principles of our civilization."*
>
> ~Friedrich Hayek

Can we create law without government? This research question I posed back in 2017 when starting this project. I was not alone. In those days, waves of excitement rippled across cyberspace. The future had arrived. New Internet-based technologies connected people in ways previously unimaginable. The zeitgeist suggested that we would all become citizens of online countries, that computer code would assume the role of government, and that digital currencies would herald the demise of traditional banking. Networks of individuals using peer-to-peer technology to cooperate globally—a process known as 'decentralization'—would supplant the existing order. People would transact and interact globally without borders or restrictions. None of this happened. Why?

Decentralization inevitably runs into its nemesis: physical reality. The moment the computer switches off, we return to a large, complex world filled with humans and human systems—with cultures, traditions, nations, and...laws. How do these decentralized networks relate to existing laws and regulations? Is it even reasonable to expect the real world to adjust to a digital one? What does it mean to have digital currencies operating beyond the control of any single jurisdiction? Few asked—let alone answered—these questions. That is, until now. In this book, I aim to provide definitive answers to the question how decentralized technologies relate to existing law. Not the law of a single nation but law in general: law as intended, its reality, and how it should be.

Until now, the general legal writing—including my own—has tried to reconcile decentralized technologies with existing laws. We have aimed to make the industry understand that its online activities are not isolated from the law. Consequently,

we have followed existing legal doctrines. But do they suffice? As an international tax professional, I am closely familiar with financial regulation. In this capacity, I learned in 2021 that during G20 meetings, the world's most powerful governments collaborate to establish regulations for decentralized technologies—particularly cryptocurrencies. I learned that cryptocurrencies' decentralized nature directly opposes their regulatory objectives. This brings us to a fascinating observation: while the digital world aims to disrupt the existing system, the existing system aims to bring the technology back under its control. One group wants to centralize, the other to decentralize. Controversy is inevitable.

This presents a dilemma: when we follow the current regulations to their logical conclusion, there can be no decentralized financial system. When we proceed aggressively with decentralizing finance anyway, we face endless regulatory uncertainty. I realized that if cryptocurrencies were ever to succeed, code alone would not be enough: we would need to rethink the law. But that is not all. What I discovered—and have explained in this book—is that the law no longer functions as an equal distribution of rights and duties. Moreover, laws are no longer made by elected governments alone. Unaccountable institutions now write many of our laws, and in doing so are attacking not only this industry but democracy and liberty itself.

Suddenly, with this realization, my work took on the utmost gravity. The question expanded beyond finding tools to simply govern decentralized networks. Now the question challenges governance itself—the very laws and institutions that regulate our lives. The time has come to face contemporary unaccountable governance, which spreads across nations like a suffocating blanket of bureaucracy. How do we move forward? When confronted with unjust laws, where does one begin? When one realizes that the current order no longer suffices for the future, to whom does one turn?

To visualize a future of liberty and justice, I started with those who did this work before me: the American Founding Fathers. I read their biographies and writings. Following their footnotes revealed an outline of the knowledge that formed the foundation of their ideas. It rested on classical education—Greek philosophy and Roman law—combined with the European Enlightenment's ideas of liberty. These ideas differ from current discourse. It dawned on me that my understanding was insufficient. I realized that to comprehend where we are going, I needed to truly know where we came from. To understand law, I had to go back to its origins. This is what I did.

Section I of this book summarizes my journey through 2,500 years of legal history. I started with the earliest Western writings, such as Greek myths and the *Iliad*,

and progressed through various Greek philosophies. I discovered how the Romans incorporated these ideas into many of the legal standards we use today. I learned how studious monks transported these ideas through the Middle Ages to be picked up by Renaissance and Enlightenment legal philosophers. These ideas led directly to several crucial developments: the rule of law, individual rights and duties, the social contract, the modern nation-state, the Constitution of the United States, the concept of human rights, and the international laws and institutions that now govern the world. Once I understood the principles that shape our world, I measured them against various critical viewpoints and the beliefs of non-Western cultures. I further discovered that the modern era broke with millennia of legal tradition, leading to widespread top-down law-making that has become pervasive across societies. Moreover, these law-making powers are increasingly shifting to an international governance structure with limited accountability. Section I gives the reader an exact understanding of the history of laws, the law's objectives, and how these principles have been distorted. I firmly believe that the attentive reader—especially one in favor of financial freedom—will recognize the gravity of the threats to liberty presented in this book.

Next, Section II explores the legality of decentralized technologies—particularly the blockchain. To write with confidence, I learned how to code smart contracts and create my own (test) cryptocurrencies, NFTs, and decentralized organizations. This helped me understand what this technology can—and especially cannot—do. I read numerous publications on the legality of blockchain technology, finance, and monetary policy. I studied institutional analyses of various blockchain projects and the laws passed to regulate them. The research especially uncovered the fundamental difference between the asset-based nature of blockchain technology and our existing debt-based financial system. This technology has tremendous impact on property and transaction rights that are not yet widely understood. Section II combines all this knowledge into a one-of-a-kind overview of the legal implications of blockchain technology. It then zooms in on the legality of various blockchain technologies, such as smart contracts and digital tokens and decentralized autonomous organizations, finance, jurisdictions, arbitration systems, and more. The conclusion: these technologies lack a legal framework. This prevents wider use and needs to be addressed.

Over eight years, I read more than three hundred books, articles, white papers, and laws, including historical and contemporary court cases and international and national financial regulations. To the best of my knowledge, this is the first attempt to systematically analyze the intersection between decentralized technology and law on such a fundamental level. I summarized all this knowledge in the book you now have before you.

The main conclusion is that our existing legal system leaves ample room for innovation and financial liberty. The outcome of my research is surprisingly positive. The opportunities in our system for decentralized law creation are significant and varied. It turns out that blockchain technology can decentralize more than finance—it can decentralize law creation itself!

However, the subversion of our legal system is real and ongoing. The legal problems facing this industry cannot be solved by code alone. If the issues highlighted in this book are not addressed, the decentralized revolution will end before it can start. Before we can experience its full benefits, we must address the current global governance structure—an issue extending far beyond technology alone. It touches on what we want the future of law, and therefore the future of human organization, to be. This pushed me to re-imagine the legal order as it currently exists. To draft new liberty-preserving legal instruments and merge universal and immutable legal principles with immutable open-source technology. I ultimately envisioned a law that is global, universal, and decentralized. A law supported by technology but not dominated by it. A law independent of individual nations while remaining their ally rather than their adversary. A law grounded in tradition but revolutionary in its future scope and potential. A law empowering a fourth branch of government: the people.

Section III discusses this road forward. It presents the design of a new borderless legal system built on blockchain technology. A new bill of equal liberties for the twenty-first century serves as its foundation. Next, I suggest a bill to regulate the rights and duties of states. As a legal innovation, it aims to protect collective free will against global institutions. Next, it introduces a groundbreaking legal concept called 'Freedom of the Nodes,' which aims to protect decentralized networks using principles like those governing international waters—protecting them from the sovereignty of any individual state while ensuring unrestricted use for all participants. If we fail to address this, I foresee global decentralized networks crumbling under wave after wave of global law enforcement and institutional involvement.

Section III continues with the Decentralized Legal System, a framework to integrate blockchain technology with existing law and courts. It then introduces the Consensus Jurisdiction, a way to transform legally toothless technology networks into voluntary private law societies with enforceable rights and duties. It then defines Decentralized Law and suggests ideas for how technology networks can create and enact their own laws. Next, it presents the Decentralized Autonomous Association, a simple solution that removes legal complexity from decentralized governance tools and makes them available to all organizations of the world. Section III ends with a host of exciting new business opportunities made possible by the innovations presented in this book. As a final note, I introduce a three-pillar

plan outlining how to realize the ultimate vision: a world governed under voluntary decentralized law.

Society is deviating from the principles on which it was formed. Law no longer works as intended. This book aims to turn law into a voluntary tool for global cooperation under principles of equal liberty and justice for all. Blockchain technology can facilitate this. It suggests a new way of thinking that turns existing ideas about law upside down. It replaces top-down law enforcement with law empowerment. This approach enables a revolutionary next level of globalization: individuals creating voluntary, equal, and bottom-up laws.

The future of law is decentralized!

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SECTION II: Blockchain Law

SECTION III: Decentralized Law

How to Read this Book

This book explores the law's history, the legality of decentralized technology, and their combined future. Three sections examine these topics in depth. The book follows a logical structure, with later arguments building upon earlier ones. Reading chronologically best introduces all relevant topics and shows how blockchain technology and the law can eventually merge. However, readers may wish to explore specific topics. Here's how to navigate the content effectively.

Quick Readers
Each chapter and section contain a summary at the end. For the fastest comprehension, read the following:

- Introduction
- Search function (Ctrl + F): "Summary and" (scroll through all chapter/section summaries).

Historic Foundations of Law

- Section I: Entirely
- Section II: Chapter 7.3. (Property Rights)
- Section III: Chapter 16 (Rights), Chapter 17 (Collective Rights), Chapter 18 (Freedom of the Seas)

Legality of Blockchain Technologies

- Section I: Chapter 4.3. (Regulations)
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Private Decentralized Legal Systems

- Section I: Chapter 5 (Private Law)
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Decentralized Legal Innovations

- Section III: Chapter 16 (Decentralized Bill of Liberties)
- Section III: Chapter 17 (Declaration of State Rights and Duties)
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- Section III: Chapter 19 (Decentralized Legal System)
- Section III: Chapter 20 (Decentralized Law)
- Section III: Chapter 21 (Decentralized Autonomous Association)
- Section III: Chapter 22 (Decentralizing the Law)

The Introduction, three Section Summaries, and the introduction to Section III provide the book's core argument and can be considered mandatory reading for all audiences.

§ 1. Methodology

This work differs from typical scientific research in both scope and method. I analyzed extensive sources, following where the research led me with an open mind. This work has more in common with the legal treatises written by legal philosophers of a previous time than it does with the modern scientific paper. Contemporary scientific papers and theses follow a more structured approach, limiting their focus to a specific question and topic. While this process drives scientific enhancement, it cannot logically result in a clear vision of the future. The development of a roadmap toward a fair legal system extends beyond these research constraints. Naturally, each topic discussed throughout these pages remains open for further exploration through scientific inquiry.

I have maintained academic principles. Most prominently, primary and authoritative sources, such as historically respected legal scholars and philosophers, are used. In various sections of the book, I have woven their argument into a chronological overview of how the legal system developed over time. These consist generally of collections of their exact words, with only minor editing for readability. In select cases, I rely on scientific articles and modern scholarly interpretations of such foundational works.

When discussing a law, where possible, I directly cite the relevant legislation or court rulings. For modern legal interpretations, I rely on university textbooks. For blockchain-law relationships, I reference publications from respected institutions like the OECD, FATF, and UN. I cite blogs, news sites, and Wikipedia-style sources only as examples, not as a foundation for arguments. Similarly, I reference white papers and articles from the crypto space only to explain the technology, as for the most part their scholarly approach differs from this work's objectives.

This work explores law as it exists and was formed. Writers frequently start with established ideals, seeking arguments to support their convictions. This approach characterizes much research—especially in social sciences but also in the crypto space. Contrary to these practices, I read most cited books and papers in their entirety, analyzed the footnotes to identify their sources, summarized their contents, and extracted their main arguments. I then compared these arguments to other writings on the topic and to contradictory viewpoints. Understanding how the legal system developed helped me devise well-grounded solutions. During this long and arduous process, I often found my ideas challenged. This forced me to revise my position on many occasions.

This book relies heavily on old sources. Given that many originals were written in Latin or Greek, I relied on English translations whose clarity and quality vary

significantly. In a few cases, I provided my own translations (especially of Dutch and German writings). To account for possible vagueness and ambiguity in language and translations, I built my arguments on the axioms found in these texts. Certain ideas recur consistently over time, expressed both in the law and in footnotes of later scholars. Examining such a long period reveals recurring core ideas by seeing them repeated over and over again. This approach enabled the extraction of ideas that shaped the legal world while limiting personal bias. The work establishes fundamental principles instead of analyzing specific cases or time periods or imposing my ideal on the world.

Regardless, trying to make any definitive statements on the law and its origins is bound to be controversial. Various books I read aimed to do that, and each had different focal points and nuances. The law, as well as legal philosophies, remains open to interpretation and various viewpoints. It develops over time and varies from country to country. Consequently, the ideas presented in this book aim to provide a high-level overview of the various laws applicable to our lives.

The contemporary divorce of legal philosophy from legal practice enabled the development of novel approaches to legal reform. One UN paper on the legal aspects of blockchain technology referred to the possibility of introducing stewardship systems developed by Indigenous peoples such as the Native American Iroquois tribe.[1] Although I am open to alternatives and hope my ideas will support such experiments, none of our laws derive from the Iroquois. Such thought experiments tell us nothing about how our current legal system operates. This principle extends to the libertarian romanticizing of historical periods with communal and cooperative law without state authority. While interesting for philosophical discussion, these ideas have little practical application in a world of supranational governance and cross-border derivative contracts. This book focuses on real laws, not hypothetical or ideal ones.

1 UNOPS, *"Legal Aspects of the Blockchain,"* (United Nations Office for Project Services, Copenhagen, Denmark, 2018), 12 Open Source Development, page 196, [Author: the paper cites the "circle," proposed by Miki Kashtan, as a "global governance system." Her cited paper contains the following: *"We recognize the circle and forms of governance developed by indigenous peoples, especially the Iroquois. Their matrilineal system has operated consensually at multiple layers for hundreds of years. For example, Mohawk village councils are platforms for universal deliberation of issues then brought to the Council of Chiefs representing each of three clans. The first clan deliberates and proposes a resolution. The second and third clans either support the resolution or ask for a reconsideration. The process is repeated until all clans reach an agreement. We remain clear that it's only because we lost this legacy that we need a new and complex system to re-integrate with these ways of being and governing."].*

Modern discourse often judges the validity of ideas based on the characteristics of their contributors, or unrelated ideas prevalent at their time, rather than the ideas themselves. This book does not contribute to this fallacy. It consciously builds upon the arguments of those before us who shaped our legal world. While one can disagree with the interpretation or presentation of this information, the laws codifying these concepts guide our lives regardless of opinion. This work builds upon universal, proven, and ancient principles rather than contemporary idealism. Furthermore, this book examines law from a general perspective rather than focusing on a specific country. Readers should approach this book from the perspective of a decentralized network, maintaining an open mind beyond localized ideas of law and government. While this work cites laws to illustrate examples, legal concept interpretations vary across jurisdictions. This is unavoidable. Naturally, the practical use of this book will be different in each jurisdiction as well.

Those not interested in legal philosophies may find this work challenging. However, I want this book to be a foundational work. It is not a work of infotainment but a serious scholarly thesis. I tried to alleviate the book's complexity through careful editing, by providing examples, and by using an active voice and simple sentence structures. However, this ultimately is a serious work that aims to make a lasting contribution.

This book underwent multiple rounds of review, including expert feedback from various disciplines, line editing based on suggestions from Claude.ai, grammar checking with Grammarly, copy editing by a professional editor, and proofreading by a professional editing firm. Regardless, I assume full responsibility for any remaining errors in wording or grammar, given my central role in processing all suggestions and making style choices.

Intense debates rage within the crypto community between proponents of various digital assets. The main distinction centers on Bitcoin, the first and leading digital asset. This book does not enter this debate but acknowledges Bitcoin's importance while addressing many functionalities currently not possible with Bitcoin's technology. Different decentralized networks serve various functions as the technology evolves. Therefore, regulators generally classify crypto under the same umbrella. This book examines all digital assets and treats terms such as Bitcoin and crypto as interchangeable.

This book examines the concepts of nations, countries, states, city-states, and nation-states. The main binding factor is that each serves as the source of civil laws for specific populations within defined geographical areas. The book treats these terms as interchangeable and aligned with the definition of a state according

to the Montevideo Convention. The book primarily uses the term state because it emphasizes the dual role of civil lawmaker and source of international law.

Emphasis and key terms appear in italics or ‘single’ quotation marks, while exact quotes appear in “double” quotation marks, with corresponding sources in the footnotes. Author remarks are added in [brackets].

Given that this book focuses on general legal principles applicable across time and jurisdictions, and since none of the recommendations have been formalized in any particular jurisdiction at the time of writing, nothing in this book can constitute legal or financial advice.

§ 2. New Blockchain Legal Concepts

In this book, several new concepts are introduced. These are clarified here here.

Blockchain Voting System
An interface for traditional organizations to use decentralized governance technologies for engaging their stakeholders.

Consensus Jurisdiction
A set of rules that become binding law through participant consent rather than territorial authority.

Contracting Metaverse
A combination of smart contract and Metaverse software with a written contract to store what happens in the Metaverse as an immutable record to establish a unique binding agreement.

Decentralized Autonomous Association
An association of independent persons who have an interest, activity, or purpose in common that uses blockchain technology to collaborate on creating and voting for binding standards and shared principles.

Decentralized Bill of Liberties
A foundational legal document enacted on the blockchain that establishes minimum liberties for individuals across all decentralized networks.

Decentralized Enactment
The act of publishing legal principles on a decentralized blockchain.

Decentralized Law
A network of voluntarily accepted private law systems whose control is distributed both politically and technologically.

Decentralized Legal System
A functional legal system integrating blockchain technologies with existing law.

Declaration of State Rights and Duties
A blockchain-published declaration establishing clear boundaries between international and national affairs aiming to protect state sovereignty and collective free will from international powers.

Freedom of the Nodes
A legal principle that applies the concept of freedom of the seas to decentralized networks, establishing that decentralized networks—when containing native assets, governed by open-source code, sufficiently decentralized, and

universally accessible—may be freely used without conditions by every human being.

Legal Wiki
A system for codifying and publishing Decentralized Law, offering easy hyperlinking, accessibility, and community participation.

Rule-Based Legislation
Hard-coded rules within blockchain-based legislation specifying when and how periodic changes occur.

Smart Contract Block
A standard that merges human-language contracts with smart contracts to form binding agreements.

§ 3. List of Abbreviations

AI	Artificial Intelligence
ADP	Agreement under Decentralized Principles
AML	Anti-Money Laundering
BIP	Bitcoin Improvement Proposal
BIS	Bank for International Settlements
BRICS	Intergovernmental organization consisting of ten countries—Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran and the United Arab Emirates.
BVS	Blockchain Voting System
CAS	Court of Arbitration for Sport
CBDC	Central Bank Digital Currency
CFR	Charter of Fundamental Rights of the European Union
CFTC	Commodity Futures Trading Commission
CJ	Consensus Jurisdiction
COALA	Coalition of Automated Legal Applications
DAA	Decentralized Autonomous Association
DAO	Decentralized Autonomous Organization
Dapp	Decentralized Application
DBoL	Decentralized Bill of Liberties
DeFi	Decentralized Finance
DeLaw	Decentralized Law
DLS	Decentralized Legal System
DNB	Dutch Central Bank (De Nederlandsche Bank)
DoSR	Declaration of State Rights and Duties
ECB	European Central Bank
ECLJ	European Centre for Law and Justice
ECHR	European Court of Human Rights
ESG	Environmental Social Governance
EU	European Union

EVM	Ethereum Virtual Machine
FATF	Financial Action Task Force
FIFA	Fédération Internationale de Football Association
FINMA	Swiss Financial Market Supervisory Authority
FotN	Freedom of the Nodes
FSB	Financial Stability Board
G7	Group of Seven; intergovernmental political and economic forum consisting of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
G20	Group of Twenty; intergovernmental forum comprising 19 sovereign countries, the European Union (EU), and the African Union (AU)
HCCH Principles	Principles on Choice of Law in International Commercial Contracts
HLC	Human Language Contract
ICO	Initial Coin Offering
IFAB	International Football Association Board
IHR	International Health Regulations
IMF	International Monetary Fund
IMO	International Maritime Organization
IO	International Organization
IP	Intellectual Property
IPFS	InterPlanetary File System
IRS	Internal Revenue Service (US)
ISO	International Organization for Standardization
JPM	JP Morgan
KYC	Know Your Customer
LLC	Limited Liability Company
LoSC	Law of the Sea Convention
M&A	Memorandum and Articles of Association
MiCA	Markets in Crypto-Assets Regulation (EU)
NFT	Non-Fungible Token

NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
PHEIC	Public Health Emergency of International Concern
PIL	Private International Law
RWA	Real-World Assets
SCB	Smart Contract Block
SEC	Securities and Exchange Commission (US)
UAE	United Arab Emirates
UDHR	Universal Declaration of Human Rights
UK	United Kingdom
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNIDROIT	International Institute for the Unification of Private Law (Institut international pour l'unification du droit privé)
UNOPS	United Nations Office for Project Services
UNODC	United Nations Office on Drugs and Crime
UPICC	UNIDROIT Principles of International Commercial Contracts
U.S.	United States
USD	United States Dollar
VASP	Virtual Asset Service Provider
VOC	Dutch East India Company (Vereenigde Oostindische Compagnie)
WEF	World Economic Forum
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

§ 4. Acknowledgments

Gratefully, I acknowledge the contributions of those who offered insights, support, and encouragement along the way. First of all, I thank Marvin Hansen for sharing the adventure of venturing into open-ended projects with uncertain outcomes and for reviewing the technical aspects of my writing and code. I want to thank Willem G. Cornax for providing extensive and valuable feedback on my legal philosophy. The same applies to Genesis Sanchez. I thank Agustinus Theodorus for providing feedback on my technical ideas and sharing a laugh at some of the sections I removed.

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SECTION I

The Four Sources of Law

I

Introduction

> *"The science that studies causes is more informative than any other, since the people who really give us information about anything, are those who tell us its causes."*
>
> ~Aristotle

Where should one begin when merging blockchain technology with existing law? Can the two worlds meet? These questions have remained unanswered in the fifteen years since blockchain technology emerged. No one has conducted a thorough analysis—until now.

For the future decentralized economy to thrive, what is legally possible must be first understood. Can the decentralization many hope for happen? Luckily, our legal system provides the liberty to facilitate the free exchange promised by blockchain technology. Unfortunately, law developed into a tool for regulators to enforce their policies, policies which are unfavorable to the peer-to-peer economy. These regulatory hurdles must be dealt with if decentralized technology is to reach its full potential.

To do so, certain questions must be asked. What is law? Who conceives it? Who regulates—and increasingly dictates—our lives? What law-creating methods are currently used, and what philosophical ideas underpin them? Most people associate law with their government and court system. This answer, while correct, reveals only part of the picture. Law contains a wide variety of components, such as legislation, customs, court rulings, international treaties, public policies, and private contracts. Laws vary in their application; some govern particular situations, others certain people or places. Law evolves, expands, and changes over time—like a living organism.

What Is Law?

Entire books have been written on what law is and what its objectives are. Yet no single definition of law remains undisputed. Indeed, German philosopher Immanuel Kant (1724–1804) reminded us that the question "what is law?" may be said to be about as embarrassing to the jurist as the question "what is truth?" is to the logician.[2] In the face of the plurality of legal thought, making definitive claims about the law may prove an impossible task. Still, to envision a legal system for the twenty-first century, a foundation is needed.

First, the 'frame' through which to assess this topic must be established. The context in which we look at law is that of decentralized networks. Section II of this book explains in detail how blockchain technologies relate to the law. For now, suffice it to say that these technologies operate across borders and are not subject to a single jurisdiction. In addition, these technologies operate without sanction from any state. As will be clear from the remainder of Section I, modern legal practice contains various sources of law besides state law. As such, our definition must be broad and not restricted to one viewpoint or jurisdiction.

In our analysis, regulation must be included. Regulation is "a rule made and maintained by an authority, typically a governmental agency, to control or govern conduct within its jurisdiction."[3] While not always obvious, regulations form some of the most influential laws in our daily lives and make our interactions predictable. Moreover, not all regulatory standards are designed by the state—a major topic in this book—and some regulations are not even laws but are followed nonetheless. Clearly, our definition must account for various forms of regulation as well.

According to *Black's Law Dictionary*, Sixth Edition, law, in its generic sense, is a "body of rules of action or conduct prescribed by controlling authority, and having binding legal force."[4] This definition aligns with how most people perceive law: a set of rules mandated by 'the government'—the mass of legislative, administrative, and judicial rules and procedures in force in a given country. The first problem is that rules exist without being prescribed by a controlling authority (such as those agreed to in contracts). Moreover, there are sources of governing laws other than the state, such as rules imposed by international bodies. This definition is too

2 Kant, Immanuel, "*The Science of Right, Translated by W. Hastie,*" (Global Grey eBooks, 2018), page 1. [Author: the book posits the question: what is right? In German, the word 'recht' means both 'right' and 'law.' Based on the context I accepted this translation].

3 *"regulation,"* (Legal Information Institute, Cornell Law School), accessed on March 11, 2025, https://www.law.cornell.edu/wex/regulation

4 Black, Henry Campbell, "*Black's Law Dictionary – Definitions of the Terms and Phrases of American and English Jurisprudence, Ancient and Modern,*" (West Publishing Co., Sixth Edition, 1990).

narrow. An overly narrow view of law obscures not only law itself but also the various histories that shaped our present understanding and, consequently, the many potential paths for law's future development. Moreover, if we accept this definition, we close the door to decentralized legal development, as there are no central authorities within decentralized networks.

John Salmond (1881–1968), New Zealand legal scholar and judge, defined law as "the body of principles recognized and applied by the state in the administration of justice," or, more shortly, "the law consists of the rules recognized and acted on in courts of justice."[5] Salmond's definition is broader (even broader than it first appears). It positions the state as the force administering justice by enforcing not just its own rules but also those it or its courts recognize. This expands the scope of law to include various types of law, such as local, international and private contract law. Simultaneously, this definition limits valid laws to what courts can enforce. Real-world enforceability is what many exotic (legal) ideas in the crypto space lack.

An even broader definition can be found in The Merriam-Webster Dictionary. According to it, law is

> *"a binding custom or practice of a community: a rule of conduct or action prescribed or formally recognized as binding or enforced by a controlling authority."*[6]

This definition includes laws bound to a 'community' and extends law-making beyond state authority. Most blockchain projects operate as community-based organizations with recognized, not enforced, rules. Therefore, Merriam-Webster's definition seems to align with the reality of blockchain projects. At the same time, the words 'recognized' and 'enforced' in combination with 'controlling authority' indicate that not everything can be called a law; it requires either enforcement *or* recognition.

Law as a Broad Concept

Can law be considered in an even broader light? American legal scholar Harold J. Berman (1918–2007) argued that law involves—besides legal rules—legal institutions and procedures, legal values, concepts, and ways of thinking. Moreover, the law has purposes other than governance in its usual sense: it is an enterprise for facilitating voluntary arrangements through the negotiation of transactions, the

5 Salmond, John W., "*Jurisprudence, Fourth Edition,*" (Stevens and Haynes, London, 1913), § 5, page 9.

6 *"law,"* Merriam-Webster Dictionary, accessed on December 27, 2019, https://www.merriam-webster.com/dictionary/law

issuance of documents (for example, credit instruments or documents of title), and the performance of other acts of a legal nature. Law in action consists of people legislating, adjudicating, administering, negotiating, and carrying on other legal activities. It is a living process of allocating rights and duties, thereby resolving conflicts and creating channels of cooperation.[7]

Berman continued that law is considered to have a character of its own—a certain, relative, autonomy. Law is conceived as a coherent whole, an integrated system, a 'body' developing over generations and centuries. It contains within itself a legal science—a meta-law—by which it can be both analyzed and evaluated. As a self-evaluating system, it survives over long periods because it contains a built-in mechanism for organic change. This historicity of law and its transnational character is linked with the concept of its supremacy over political authorities. Law binds all, including leaders. A theory assigning the ultimate source of law to the will of a lawmaker is wholly inadequate.[8] When tensions arise between ideal and reality, this tension "has periodically led to the violent overthrow of legal systems by revolution."[9]

Law clearly means more than just rules set by government or court rulings. However, broad definitions alone do not serve the purpose of this book; that is, to merge blockchain technology and law. To understand where law comes from and where it can go, a more fundamental question must be asked: what mechanisms establish the *rights and duties* applicable to daily life?

Jurisprudence and the Four Sources of Law

According to Salmond, jurisprudence means "the science of law, using the word law in that vague and general sense in which it includes all species of obligatory rules of human action."[10] This book, being a study into the 'science' behind law, can thus be considered a work of jurisprudence.[11]

Salmond explained that there are three areas of jurisprudence. First is civil jurisprudence—the science of civil law, or the law of the land. Its purpose is to give a complete and systematic account of that complex body of principles which is received and administered in the tribunals of state. Second, we find international

7	Berman, Harold J., "*Law and Revolution - The Formation of the Western Legal Tradition,*" (Harvard University Press, Cambridge, 1983), pages 4-5.
8	Ibid., pages 8-10.
9	Ibid., page 9.
10	Salmond (1913), § 1, page 1.
11	Author: the term 'philosophy of law' might be considered more appropriate for some (European) readers.

jurisprudence—the science of international law or the law of nations. It concerns not the rules in force within states but those that prevail between states. Third, there is natural jurisprudence—the science of that which our forefathers termed natural law or the law of nature (jus naturale). By this, they meant, Salmond explained, the principles of natural justice—which stand in contrast to their more imperfect and distorted reflections in civil and international law.[12]

British jurist Sir Thomas E. Holland (1835–1926) observed that the field of law may be divided between the law which regulates rights and duties between subject and subject (civis and civis) and that which regulates rights between the state and its subjects (civitas and civis). The first category is what we know as private law, the second, civil law. In addition, there is international law, regulating rights and duties between state and state (civitas and civitas).[13]

These jurisprudential categories reveal the existence of multiple forms of law. Civil law can be deduced from the constitution and the various laws and regulations that shape society. Individuals living in civil society are subject to these laws and generally influence them through representative government. Treaties and conventions, through which states agree on the principles binding them, form the foundation of international law. Private law, on the other hand, streamlines the voluntary interactions of (groups of) individuals and generally results from a contract. Finally, there is the concept of natural law, a branch of law instilled in us by nature. The core idea behind natural law is that it can be deduced from observing the universal norms and values existing across the human species.

This brings the number of sources of law to four: natural, civil, international, and private. In the remainder of Section I, the relationship between the various categories is explained, as well as the different philosophies underpinning them and their influence on our daily lives. It illustrates the traditional hierarchical structure of these laws, the ways modern society turned this order upside down, and how we are currently on a road to endless controversy—especially in the area of peer-to-peer technology.

Beyond studying various sources of law, jurisprudence studies law using three focal lenses: the *historic* view of how law was, the *systematic* view of how law is, and the *critical* view of how law ought to be.[14] The three sections making up this book follow these three viewpoints. To understand where we are heading, we first

12 Salmond (1913), § 1, page 1-2.

13 Holland, Thomas Erskine, "*The Elements of Jurisprudence, 12th Edition,*" (Oxford University Press, London and New York: Humpfrey Milford, 1916), Chapter IX – The Leading Classification of Rights [Author: paragraph edited for readability]

14 Salmond (1913), § 2, page 3.

must understand where we came from. If the decentralized movement is ever to succeed, it needs more than code. It must align with the laws that govern our lives.

The reader is cordially invited on a journey through time to discover the forgotten foundations of law that a legal system for the twenty-first century can be built on!

> *"People will not look forward to posterity, who never look backward to their ancestors."*
>
> ~Edmund Burke

II

Natural Law – Laws of God and Nature

> *"According to the truth of the logos,*
> *all is one and there is proportion,*
> *or harmony throughout the world."*
> ~Heraclites

Natural law (Latin: ius naturale, lex naturalis) is a philosophy asserting that certain laws are inherent to human nature. These laws are endowed by a higher power than the human mind, such as nature (or God), and can be understood and observed through human reason. Natural law is implied to be universal—the same for everyone on earth. It exists independently of the government, legislature, or society at large. Natural law rests on two main ideas: first, that a universal order (or human nature) governs human society and, second, that this order gives rise to inalienable rights and duties. Natural law governs human participation in the natural order through reason and will. It finds its power with the discovery of universal standards in morality and ethics. Humans engage with these universal standards by using reason, in line with natural law, to determine right from wrong.

The idea of natural law can be traced back to antiquity; Greek philosophers shaped its foundation, and the Romans turned it into a practical legal system. This chapter will show how these ideas have evolved to become the foundation of our current legal systems, from international law to national constitutions and human rights codes. A legal system of the future must relate itself to these fundamental principles. But before we get there, let us look at how it all began...

§ 2.1. Law in Ancient Greece

> *"Prophets, lawgivers, and sages have formed the character of other nations; it was reserved to a poet to form that of the Greeks."*
> ~Arnold H.L. Heeren

King Oedipus ruled the ancient city-state of Thebes with benevolence. He was father to two sons, Eteocles and Polynices, and two daughters, Ismene and Antigone. After Oedipus's death, the two brothers ruled jointly for a while until they quarreled. Eteocles ended up on top and expelled his brother from the kingdom. However, Polynices was in no mood to negate his claim to the throne. He gathered an army and attacked the city. In the ensuing battle, the loyalist army crushed the rebels, but both brothers died in battle.

Creon, brother of Oedipus and next in line, ascended the throne. Still angry about the destruction caused by the rebellion, he decreed that Polynices was not to be buried or even mourned for his role in the violence against Thebes—by penalty of death. Antigone, hellbent on performing the proper funeral rites, defied the new king's order and sneaked out at night to bury her brother. She was caught in the act.

When brought before Creon, Antigone admitted she knew of Creon's law forbidding mourning for Polynices. She chose to perform the proper funeral rites anyway, claiming the superiority of divine law over human law. The ancient Greeks believed that the correct religious rituals for the dead were demanded by the gods and essential for passage into the afterlife. In anger, Creon ordered Antigone to be buried alive in a cave. Upon consulting an oracle, Creon realized his error and hastened to free Antigone. When Creon reached the cave, he discovered Antigone had already hanged herself. Creon's son Haemon, in love with Antigone, upon hearing the news, rode out in the middle of the night in a rage and perished on a dark, mountainous road. Queen Eurydice, Creon's wife, was beside herself for the loss of both her beloved son and sweet Antigone and killed herself in grief. Creon realized his mistake and ended up going mad.

Origins in Dance and Song

The story of Antigone is one of many that survive today and make up the body of myths and tragedies of Ancient Greece. For the Greeks, tragedies were not just stories; they often contained moral teachings and instructions. Almost no one could read or write. Anything that had to be passed on, including laws and religious rituals, had to be passed on through song, dance, and storytelling. According to Plato, the legislative process in Ancient Greece proved a delicate matter of picking

the correct songs and dances for the audience to hear and instructing poets to follow the mind of the judges rather than indulging in pleasures and fancies.[15]

It is no surprise that the origin story of Ancient Greece, the Iliad, on the invasion and conquest of Troy, hammers home elementary aspects of Greek society: the importance of faithfulness in marriage, how to conduct honorably and courageously in battle, when to listen to the wise advice of elders (in the person of Nestor), and the need to dutifully follow religious rites and sacrifices. And then there is the case of Ulysses and the price he paid for hubris, for disrespecting the Gods and forsaking one's duties at home. The stories chronicling the battle of Troy spoke to the core of what it meant to be Greek. They instilled in society the proper behavior, and even a measuring stick to judge each other in politics and court.[16]

The Free City-States of Greece

Ancient Greece (c. 600–323 BC) bore little resemblance to the modern country we know today. The Greek-speaking world spanned modern-day Greece, Southern Italy, and western Turkey. In addition, Greek peoples founded colonies across the Eastern Mediterranean in modern-day Syria, Lebanon, Egypt, Libya, and even around the Black Sea.[17] In addition, the Greek world was not united politically but divided into a mosaic of city-states—often at war with each other and their barbarian neighbors. Organized on the principle of citizenship, the Greek city-state was made up of a complex community of people of different legal and social statuses, from slaves to free men and their dependent families. One of its most

15 Plato, *"Laws – translated by Benjamin Jowett,"* (Gutenberg Project, May 1, 1999), BOOK VII: "*There are many ancient musical compositions and dances which are excellent, and from these the newly-founded city may freely select what is proper and suitable; and they shall choose judges of not less than fifty years of age, who shall make the selection, and any of the old poems which they deem sufficient they shall include; any that are deficient or altogether unsuitable, they shall either utterly throw aside, or examine and amend, taking into their counsel poets and musicians, and making use of their poetical genius; but explaining to them the wishes of the legislator in order that they may regulate dancing, music, and all choral strains, according to the mind of the judges; and not allowing them to indulge, except in some few matters, their individual pleasures and fancies.*"

16 Michigan Law Review, "*The Greek Concept of justice,*" (MICH. L. REV. Volume 77, Issue 3, 1979), https://repository.law.umich.edu/mlr/vol77/iss3/37, pages 864-865: "*In preliterate societies, […] the epic or its equivalent stores and transmits culture, conserving the nomos and ethos, the life-style and proprieties, of the audience which hears it.*" "*Because the Homeric epics preserved culture in this way, their presentation of 'justice' is particular and situational. […] In the Iliad, 'justice' is a procedure for resolving disputes before a mass audience whose witnessing of the contending parties' confessions, vows, and settlements substitutes for written documents as a record of the event.*"

17 Martin, Thomas R., "*Ancient Greece – From Prehistoric to Hellenistic Times,*" (Yale University Press, New Haven & London, Second edition, 2013), page 71, map 3.

remarkable characteristics was the extension of citizenship and a certain share of political rights to even the poorest freeborn local members of the community. Since these principles are taken for granted in many contemporary democracies, it can be easy to overlook how unusual they were in antiquity.[18]

Greek citizenship differed from our modern version. It was not provided to all persons in society. Greek city-states formed out of collections of families, each being a sovereign unit. A family in Ancient Greece was a group of persons whom religion permitted to invoke the same sacred fire and to offer the funeral repast to the same ancestors.[19] The father ranked first in tending to the sacred fire. The family and the worship were perpetuated through him. He represented, himself alone, the whole series of ancestors, and from him the entire series of descendants were to proceed.[20] The wife, children, extended family, and dependents had no status under the law; they fell completely under the rule of the father.[21] The father thus represented a family as a citizen of the city.

Citizenship carried certain legal rights, such as being able to exercise freedom of speech, vote in political and legislative assemblies, elect officials, have access to courts to resolve disputes, have legal protection against enslavement by kidnapping, and participate in the religious and cultural life of the city-state.[22] The Greek world was already known for concepts such as isonomia, equality before the law; isotimia, conceived as equal respect for all; and isogoria, conceived as equal freedom of speech.[23] The majority of people agreed that it was no longer acceptable for others to tell them what to do without their consent, because, at some fundamental level, they were all equal and therefore deserved a more equal or at least a more similar say in how things were run.[24]

The judicial reforms of Athenian statesman Solon (c. 630–560 BC) exemplified this principle. He instituted as a legal right that any male citizen could bring charges on a wide variety of offenses against wrongdoers on behalf of any victim of a crime. Perhaps most importantly, he specified a right of appeal to the assembly by persons who believed a magistrate had rendered unjust legal decisions or verdicts

18	Martin (2013), pages 65-66, [Author: paragraph altered for readability].
19	Fusel De Coulanges, Numa Denis, "*The Ancient City – A Study on the Religion, Laws, and Institutions of Greece and Rome,*" (Batoche Books, Kitchener, Ontario, 2001), page 32.
20	Fusel de Coulanges (2001), page 69.
21	Fusel de Coulanges (2001), page 75: "*This judicial authority, which the chief of the family exercised in his house, was complete and without appeal. He could condemn to death like the magistrate in the city, and no authority could modify his sentence.*"
22	Martin (2013), page 78, [Author: paragraph altered for readability].
23	Lauterpacht, Hersch, "*International Law and Human Rights,*" (Frederic A. Praeger, Inc., New York, 1950), 2. Greek Philosophy and the Greek State, page 81.
24	Martin (2013), page 84, [Author: paragraph altered for readability].

against them. With these two measures, Solon made the administration of justice the concern of all citizens.[25]

For its place and time, the political system of Athens was remarkable. It laid the foundations for democracy and the rule of law, and it granted all male citizens the possibility of participating meaningfully in the making of laws and the administrating of justice.[26] Equally influential were the ideas leading to all this innovation.

Greek Legal Philosophy

> *"May I be of a sound mind, and do to others as I would that they should do to me."*
>
> ~Plato

Beyond politics and law, Greece is renowned for cultivating the world of ideas and the love of wisdom—better known as philosophy. By observing that celestial bodies moved in a regular pattern, philosophers such as Thales and Anaximander (c. 610–540 BC) drew the revolutionary conclusion that the physical world was regulated by a set of laws of nature rather than by the arbitrary intervention of divine beings.[27] Heraclitus of Ephesus (c. 500 BC) spoke of order and harmony in the world, which speaks to the wise man, communicating its inner nature, enabling him to model himself upon it.[28]

This idea, that a 'natural law' governs how reality operates, was a significant development for later philosophical and scientific thought—*and the world of law*. While the early Greek philosophers were instrumental in forming Greek thought, they remain in the shadows of what are known as the big three: Socrates, Plato, and Aristotle.

Socrates

Socrates (c. 469–399 BC), despite being considered one of the founding figures in philosophy, is not known for any of his direct writings. He is remembered through

25 Martin (2013), page 111 [Author: paragraph altered for readability].

26 Martin (2013), page 111, [Author: paragraph altered for readability].

27 Martin (2013), page 118, [Author: paragraph altered for readability].

28 Robin Waterfield, "*The First Philosophers - The Presocratics and the Sophists, Oxford World's Classics,*" (Oxford University Press Inc., New York, Epub, 2000), Chapter: Heraclitus of Epheus: "*According to the truth of the logos, all is one and there is proportion or harmony throughout the world.*" "*The whole world is intelligent and alive, and speaks to the wise man subtly, communicating its inner nature and enabling him to model himself on it.*"

secondhand sources, mainly from his student Plato. Socrates devoted his life to combating the idea that justice should be equated with the power to work one's will over others; his passionate concerns to discover valid guidelines for leading a just life and to prove that justice is better than injustice under all circumstances pivoted Greek philosophy toward an emphasis on ethics.[29] Socrates passionately believed that just behavior was better for human beings than injustice; it creates genuine happiness and well-being.[30]

Essentially, he argued that just behavior, which he saw as true excellence, was identical to knowledge and that true knowledge of justice would inevitably lead people to choose good over bad and therefore to have truly happy lives. Those who desire bad things do not know that they are truly bad; otherwise, they would not desire them. He further argued that committing an injustice is worse than suffering one. Therefore, given the choice between the two, we should choose to suffer rather than to commit an injustice. The virtuous person, he concluded, acting in accordance with wisdom, attains happiness. Virtue is sufficient for happiness and more important than wealth, which is the excess of what one has over what one requires.[31]

Socrates practiced what he preached. As a result, Socrates met a fate common to independent thinkers in history: he was charged with undermining the established order and corrupting the youth. He defended himself with reason and logic but could not prevent his conviction by a frenzied mob. He was allowed to argue for a lighter sentence but reasoned that death would be the only logical punishment for the crime he stood accused of.[32] Moreover, he believed that life in exile, another common punishment, is worse than death.[33] And when later offered by a wealthy friend to escape from prison, he refused, as the penalty for his crime was death and he had been convicted. He based that obligation not on the absolute claim of the state to obedience but on an implicit contract to which he was a party.[34] He pursued the ideals of truth and justice to the end.

29 Martin (2013), page 214, [Author: paragraph altered for readability]

30 Martin (2013), page 214, [Author: paragraph altered for readability]

31 *"Socrates (469-399 B.C.E.),"* (Internet Encyclopedia of Philosophy), accessed on Aug 8, 2024, https://iep.utm.edu/socrates/, [Author: summary from various arguments].

32 Plato, *"Apology, Crito, and Phaedo of Socrates,"* (Project Gutenberg, Oct 12, 2004, translation Henry Carey), https://www.gutenberg.org/cache/epub/13726/pg13726-images.html, Apology.

33 Ibid., Crito: "*Moreover, in your very trial, it was in your power to have imposed on yourself a sentence of exile, if you pleased, and might then have done, with the consent of the city, what you now attempt against its consent. Then, indeed, you boasted yourself as not being grieved if you must die; but you preferred, as you said, death to exile.*"

34 Lauterpacht (1950), 2. Greek Philosophy and the Greek State, page 82: "*When, in the Crito, Socrates, awaiting execution and refusing the help of friends who provided means for his escape, gives reasons for his duty of obedience to the unjust sentence of the State, he*

Plato

Plato (c. 428/423–348/347 BC) furthered the idea of the natural order and the idea of man being created for the whole and not the whole created for the man. Legislators are there to align themselves with the perfection of the universe.[35] Plato was, however, of the practical wisdom that the laws should be given a form that did not rely on mere natural power. After all, he observed that the best-governed Hellenic states traced the origin of their laws to individual lawgivers. These were real persons, though it remains uncertain how far they originated or only modified the institutions that are ascribed to them. 'This was what Solon meant or said' was the form in which the Athenian expressed his conception of right and justice or argued a disputed point of law.[36]

Naturally, debates in Plato's book *On the Laws* addressed the character and virtues of lawgivers and those governed as well as questions of what is good and evil. Plato opined that every person has two counselors in his bosom, both foolish and antagonistic, of which we call the one pleasure and the other pain. Expectations of hopes and fears associated with them are embodied in our laws.[37] This idea that laws are the facilitators of achieving pleasure and avoiding pain returns in later chapters.

Plato further argued that reason is the primary path to law. Even though we are puppets on the strings of faith, every human being has one string he must grasp and never let go of, and that is the sacred and golden cord of reason, called by us the

	bases that obligation not on the absolute claim of the State to obedience, but on an implicit contract—a contract which, in turn, presupposes the duty of the State to allow freedom of speech and the right to emigrate."
35	Plato, *"Laws,"* (1999), BOOK X: *"The ruler of the universe has ordered all things with a view to the excellence and preservation of the whole, and each part, as far as may be, has an action and passion appropriate to it. Over these, down to the least fraction of them, ministers have been appointed to preside, who have wrought out their perfection with infinitesimal exactness. And one of these portions of the universe is thine own, unhappy man, which, however little, contributes to the whole; and you do not seem to be aware that this and every other creation is for the sake of the whole, and in order that the life of the whole may be blessed; and that you are created for the sake of the whole, and not the whole for the sake of you."*
36	Ibid., Introduction, [Author: introduction, so this section is written by the translator/author, and not Plato himself. Paragraph altered for readability].
37	Ibid., BOOK I: *"Athenian. And each one of us has in his bosom two counsellors, both foolish and also antagonistic; of which we call the one pleasure, and the other pain. Cleinias. Exactly. Athenian. Also there are opinions about the future, which have the general name of expectations; and the specific name of fear, when the expectation is of pain; and of hope, when of pleasure; and further, there is reflection about the good or evil of them, and this, when embodied in a decree by the State, is called Law."*

common law of the state.[38] He proposes the idea of a natural state existing before civilization, where people lived scattered in the mountains at a level of technology and skill that did not require any laws. The earliest laws were likely formed by lawgivers: village elders or chiefs turned into legislators and magistrates.[39] We will come back to this idea of a natural state with the development of modern civil law.

Aristotle

Aristotle's influence on Western thought is undeniable. He categorized different sciences, splitting forms of thinking into different categories, and overall contributed to a body of knowledge still readily available in bookshops all around the world. More significantly, his formulation of natural law proved essential in establishing fundamental legal principles.

In his work *Rhetoric*, he used the story of Antigone as an example of the idea that the act of burying a brother is just by nature. As a logical consequence, Aristotle made a distinction between law that is universal—the same for everybody—and law that is particular to certain communities. He wrote,

> *"Law is either special or general. By special law I mean that written law which regulated the life of a particular community; by general law, all those unwritten principles which are supposed to be acknowledged everywhere."*[40]

Later, he emphasized the point that there are two kinds of law:

> *"Particular law is that which each community lays down and applies to its own members: this is partly written and partly unwritten. Universal law is the law of Nature. For there really is, as every one to some extent divines, a natural justice and injustice that is binding to all men, even on those who have no association or covenant with each other."*[41]

Aristotle thus considered the natural law universal and applicable to all humans. He contrasted this with man-made law, which exists in communities bound by social

38 Ibid., BOOK I: "*May we not conceive each of us living beings to be a puppet of the Gods, either their plaything only, or created with a purpose—which of the two we cannot certainly know? But we do know, that these affections in us are like cords and strings, which pull us in different and opposite ways, and to opposite actions; and herein lies the difference between virtue and vice. According to the argument there is one among these cords which every man ought to grasp and never let go, but to pull with it against all the rest; and this is the sacred and golden cord of reason, called by us the common law of the State;*"

39 Ibid., BOOK III.

40 Aristotle, "*The Art of Rhetoric, Collins Classics,*" (The Harper Press, paperback edition, London, 2012), page 49.

41 Ibid., page 63.

covenants. In short, Aristotle argued that aside from 'particular' laws that each people has set up for itself, there exists a 'common law' or 'higher law' rooted in nature and applicable to all. The logical conclusion from this was that the wise man, and by extension the wise community, aligns itself with this higher order. As demonstrated later in this book, the principle of a common, higher law has led to the idea of (human) rights, the modern constitution, and the international legal order that governs us today!

> *"The better a man is, the more he will follow and abide by the unwritten law in preference to the written."*
> ~Aristotle

Phronesis: Practical Wisdom

The Greeks believed that aligning with the natural order led to a peaceful society. This alignment occurred at both the communal level, through adherence to natural law, and the individual level, through the pursuit of virtues. The main virtue good Greek legislators were supposed to possess was that of Phronesis. Phrónēsis means "practical wisdom, prudence in government and public affairs." It is a derivative of the verb phroneîn, "to think, be minded, be wise," based on a balance of both the heart and the mind.[42]

Looking through this lens helps assess the two principal legal philosophies that originated in Ancient Greece. On the one hand, we have the idea of subjecting law to a natural order, on the other the idea that laws help humans attain pleasure and avoid pain. The tension between these ideas has endured since their inception. These two perspectives intertwine and shape society throughout history—like a string of DNA—fueling the endless debate between those who wish to uphold a perceived order and those seeking boundless innovation. The modern expression of this debate pits those who believe we should submit to a higher (natural) order against those who view the human mind as the ultimate legislator in the universe.

If we had preserved the 'natural' status quo, slavery would persist, women would remain excluded from public life, and international disputes would still be settled

42 *"Phronesis,"* (Dictionary), last accessed on May 8, 2024, https://www.dictionary.com/e/word-of-the-day/phronesis-2020-02-20/: *"Phronesis comes from Latin phronēsis, from Greek phrónēsis, meaning "practical wisdom, prudence in government and public affairs" in Plato, Aristotle, and other heavy hitters. Phrónēsis is a derivative of the verb phroneîn "to think, be minded, be wise"; phroneîn in turn is a derivative formed from the noun phrēn (stem phren-), whose myriad meanings include "midriff, diaphragm, heart (as seat of the passions and bodily appetites), mind (seat of the mental faculties and perception)."*

through brutal warfare. The alternative, however, is surrendering society to the whims of ever-changing pleasures to pursue and pains to avoid. In short, the law would either be a ship navigating rough seas with all the anchors out or one without a rudder or a compass—neither will reach its destination. The wise legislator does not see himself swayed by personal needs for pleasure and fear of discomfort but also does not allow a system to become stale, clinging to a world long gone.

Which of these forces should be leading in the creation of a Decentralized Legal System? Phronesis dictates that the ideal legal system recognizes and balances both forces, allowing progress over time while preserving core fundamentals. A system where human progress is facilitated while respect is given to natural constraints. Modern states honor this principle by having both fixed principles in a constitution, as well as adaptable governance systems. Other successful forms of human organization, such as Bitcoin, work similarly.

In summary, Greek thinking teaches us to maintain a progressive outlook while adhering to natural constraints. However, the Greeks did not ultimately transform these principles into formal law-making processes. That task fell to another ancient city-state.

§ 2.2. Roman Law

> *"You promis'd once, a progeny divine*
> *Of Romans, rising from the Trojan line,*
> *In after times should hold the world in awe,*
> *And to the land and ocean give the law."*
> ~Virgil (The Anneads)

In the sixth century BC, long before the days of empire, the Romans engaged in the siege of a nearby town of Ardea. During this campaign, an evening's conversation among the soldiers turned into a contest about whose wife was most virtuous. One of their number, Collatinus, suggested that they should ride back home and inspect the women; this would prove, he claimed, the moral superiority of his own beloved Lucretia. While all the other wives were discovered partying in the absence of their menfolk, Lucretia was at home working at her loom. She then dutifully offered supper to her husband and his guests.

This is where the story takes a dark turn. During that visit, Tarquin, son of the last king of Rome, conceived a fatal passion for Lucretia. One evening, shortly after, he rode back to her house. After being politely entertained again, he forced himself

into her room and demanded to spend the night with her and that she become his queen. Lucretia refused his commands, after which he forced himself on her.

The following day, Lucretia, dressed in mourning, went to her father's house in Rome, where she cast herself down weeping in front of her father and husband. After disclosing the rape, she demanded vengeance, and in despair over having to live in shame, she drew a dagger and stabbed herself in the heart. She died in her father's arms, while the women present lamented her death. This dreadful scene struck the Romans who were present with such horror and compassion that they all cried out with one voice that they would rather die a thousand deaths than suffer such outrages to be committed by a tyrant.

Brutus, who would become known as the founder of the Roman Republic, pulled the dagger from Lucretia's body. Raising it before the witnesses, he vowed to rid Rome of kings forever. They paraded the bloody remains of Lucretia around the streets of Rome and displayed her in the Forum in front of an outraged and growing crowd. The summoned legal assembly heard of this and other grievances against the king and his family. A vote was cast to exile them and install a republic, placing Rome on the road to liberty.[43]

The Art of Roman Organization

Like the foundation of Ancient Greek mythology, truth and fiction blur in Rome's origin stories; there is little evidence of their validity. Most of these stories were only put to paper centuries later, undoubtedly subjected to embellishment by future generations, painting a grand history their ancestors had a prominent role in and the virtuousness of their conduct compared to the surrounding barbarians.[44] However, it is well established that for centuries to come, the republic (or res publica in Latin, meaning 'public thing' or 'public affairs') would be governed under a novel system. This included early concepts of a legislative senate and an executive branch. Almost all positions of government were granted by public vote and for limited terms.

With the dynamic foundation and relative stability of the republic, the Roman city-state started expanding. Roman conquest was not the result of a carefully thought-

43 Author: this interpretation of the story of Lucretia is my own fusion from various sources.

44 Beard, Mary, "*SPQR, A History of Ancient Rome,*" (Profile Books TLD, London, 2015, Epub), Chapter Three – The Kings of Rome: "*Cautious scholars in the nineteenth century had been extremely doubtful about the historical value of these stories of the Roman kings. They argued that there was hardly any more firm evidence for these rulers than for the legendary Romulus: the whole tradition was based on garbled hearsay and misunderstood myth – not to mention the propagandist fantasies of many of the later leading families at Rome, who regularly manipulated or invented the 'history' of the early city to give their ancestors a glorious role in it.*"

out plan—most of it just happened. Initially, there were no detailed maps, and few people had traveled beyond their village. Romans saw their expansion more in terms of changing relationships with other peoples than in terms of control over places.[45] The elite's thirst for battlefield glory further fueled conquest, as vanquishing foreign lands brought wealth and prestige. Victorious generals were granted a triumph, Rome's highest honor, allowing them to parade their wealth and spoils before an exuberant crowd.

Despite its representative government and its rigorous legal procedures, the Roman Republic eventually became unstable. Struggles broke out between the classes, between full citizens and provinces, and between freemen and slaves. Slowly, the republican ideals faded, and the system spiraled out of control. The political process turned into mob violence and public assembles into lynch parties. Different political factions vied for dominance, and legal procedures no longer ensured the peaceful settlement of conflicts. On top of that, civil wars ravaged the lands.[46] Eventually, the republic fell victim to its indecisiveness. Order was restored by emperors who, while ruling as de facto kings, carefully avoided that title.

Rome, like other ancient city-states, did not possess a bureaucracy or an elaborate political and administrative establishment. It would be an impossibility for Roman officials to continue expanding their empire if they intended to govern new territories and their inhabitants directly. Upon conquest, the Romans made hardly any attempts to impose their cultural norms or to eradicate local traditions. Even if they had wanted to, they did not have the manpower to do it. A reasonable estimate is that even when Rome was already an empire, at any one time there were fewer than two hundred elite Roman administrators, plus maybe a few thousand slaves of the emperor, to govern an empire of more than fifty million people.[47] Rome collaborated with the elite of the subject peoples, who in turn increasingly identified their interests with the Romans (both culturally and politically).[48] Rome was open to the novos homo (new men), allowing social mobility within its power structures. Many of the famous leaders in the Roman Empire did not originate from the city itself; Marcus Aurelius, for example, came from modern-day Spain.

Roman Legal Philosophy

By conquering diverse populations, the Romans acquired fresh ideas—which they often readily adopted. Greek philosophies, being the most developed, were

45 Beard (2015), Chapter Four - Rome's Great Leap Forward.

46 Duncan, Mike, "*The Storm Before the Storm - The Beginning of the End of the Roman Republic,*" (PublicAffairs, Hachette Book Group, New York, October 2017).

47 Beard (2015), Chapter Twelve - Rome Outside Rome.

48 Ibid., Chapter Twelve - Rome Outside Rome.

particularly esteemed by the Roman upper class.[49] However, the Romans in their own right contributed to the world of ideas. Romans were a practical people, and even the philosophers had their feet grounded in reality. They typically operated in the center of society and had real-world experience in warfare, estate management, and politics. They were deeply conservative, devoted to ideals of virtue and aligning oneself with one's faith, and resistant to changes in the perceived natural order. Romans regulated the world as they found it, not as they wanted it to be.

Stoicism was the most influential philosophy in Roman times. This school of thought was best exemplified through the enduring writings of Epictetus, Seneca, and Emperor Marcus Aurelius. Marcus Aurelius practiced stoicism while ruling during a period of great upheaval, and his writings remain popular today. The central goal of Stoicism can be defined as "living in agreement with nature" and striving for "a virtuous life, virtue being the goal towards which nature guides us."[50] In other words, Stoics aimed to live in accordance with "our own human nature as well as that of the universe."[51] After all, justice, as well as law and reason, exists by nature and not by convention.[52]

Zeno of Citium (c. 334–262 BC) founded Stoicism by teaching in Athens. He argued that "virtue, not pleasure, was the only good" and that "natural law, not the random swerving of atoms, was the key principle of the universe."[53] He further argued that due to the universal order instilled in human beings "neither in cities nor in towns we should live under laws distinct one from another" and that all people were fellow country-folk who should observe "one manner of living and one kind of order, like a flock feeding together with equal right in one common pasture."[54]

Stoics argued that humans are first and foremost thinking creatures, capable of exercising reason. Although we share many instincts with other animals, our ability to think rationally is what makes us human. We evaluate our thoughts, feelings,

49	Boatwright, Mary T, Gargola, Daniel J., Talbert, Richard J.A., "*The Romans, From Village to Empire,*" (Oxford University Press, 2004), page 144, Roman and Italian Elites
50	Hicks, R.D., "*Diogenes Laertius - Lives of Eminent Philosophers,*" (Delphi Classics, Ebook, 2015), BOOK VII. Zeno, page 87.
51	Ibid., page 88.
52	Ibid., page 127.
53	Mark, Joshua J., "*Zeno of Citium,*" (World History Encyclopedia, 15 February 2011), accessed on May 8, 2024, https://www.worldhistory.org/Zeno_of_Citium/, [Author: the author of this article cites Professor Forrest E. Baird, and his book "*Philosophic Classics: Ancient Philosophy, Volume 1,*" which I was unable to verify].
54	Ibid., [Author: the author of this article cites Plutarch, but I was not able to find this quote in two translations. However, I found other authors using this quote by Plutarch as well. Maybe it is from a more modern translation. In any case it is in line with the writings of the Stoics of this time].

and urges and decide if they are good or bad, healthy or unhealthy. We therefore have an innate duty to protect our ability to reason and to use it properly. When we reason well about life and live rationally, we exhibit the virtue of wisdom. Living in agreement with nature, in part, means fulfilling our natural potential for wisdom—a central realization to human flourishing.[55]

The Stoics saw the world as a single great community in which all men are brothers, ruled by a supreme providence. It is man's duty to live in conformity with the divine will, and this means, firstly, bringing his life into line with nature's laws and, secondly, resigning himself completely and uncomplainingly to whatever fate may send him.[56] This notion of a world community (cosmopolis) became widely accepted within the Roman Empire with the development of natural law (jus naturae) by the Roman jurists.[57] Statesman and philosopher Seneca (c. 4 BC–65 AD) best illustrated the existence of a law equal to all human beings regardless of location and birth:

> *"The great lawgiver draws no distinctions between us according to our birth or the celebrity of our names, save only while we exist. On the reaching of mortality's end he declares, 'Away with snobbery; all that the earth carries shall forthwith be subject to one law without discrimination.' When it comes to all we're required to go through, we're equals. No one is more vulnerable than the next man, and no one can be more sure of his surviving to the morrow."*[58]

Cicero's Law and Politics

Stoic ideas were not merely academic speculations; they directly influenced and reflected the legal order that came to characterize the Roman Empire. Roman philosopher and statesman Cicero (106–43 BC) lived during the final days of the Roman Republic. Besides being a lawyer and gifted orator, he commanded military campaigns, sat in the Senate as an influential politician, and held various high positions as consul and provincial governor. Deeply versed in Greek philosophy, he sought to apply philosophical concepts to the practical realities of Roman politics.

55 Robertson, Donald, "*How to Think Like a Roman Emperor: The Stoic Philosophy of Marcus Aurelius,*" (St. Martin's Press, New York, Epub, 2019), Chapter: The Story of Stoicism, What did the Stoics Belief?

56 Seneca, "*Letters from a Stoic – Selected and Translated with an Introduction by Robin Campbell,*" (Penguin Group, Epub, 1969), Introduction, [Author: this section is from the introduction, so they are the general interpretation of Seneca's philosophy by the author and not Seneca's exact words].

57 Ibid., Introduction, [Author: this section is from the introduction, so they are the general interpretation of Seneca's philosophy by the author and not Seneca's exact words].

58 Ibid., LETTER XCI

Cicero has served as a leading source of Roman legal thought mainly due to his outstanding oratory skills and influential literary works, of which much survives. Unsurprisingly, natural law served as a central theme in his writings. The reason for this was practical. Their many conquests brought the Romans in contact with a wide variety of peoples. Cicero noticed that certain behaviors were universal in all territories, hinting toward one shared fundamental humanity. Moreover, there is no culture so backward, remote, or back in time that such behaviors cannot be observed at first inspection.[59] He advocated the use of reason to analyze this human nature to deduce binding rules of moral behavior instilled by God:

> *"Law is highest reason, implanted in nature, which prescribes those things which ought to be done, and forbids the contrary."*[60]

> *"For of all the questions on which our philosophers argue, there is none which it is more important thoroughly to understand than this, that man is born for justice, and that law and equity are not a mere establishment of opinion, but an institution of nature."*[61]

In his essay on government, he asserted that there is only one true law, which applies universally to everyone. This law is unchanging and eternal. To attempt to invalidate it is sinful. It is not possible to repeal any part of it, much less to abolish it altogether. From its obligations, neither government nor people can release us. And to explain or interpret it we need no one outside our own selves.[62] Cicero continued,

> *"There will not be one law at Rome, and another at Athens. There will not be different laws now and in the future. Instead there will be one single, everlasting, immutable law, which applies to all nations and all times."*[63]

In his essays on the laws, he reaffirmed his position that law is more than what is found in the opinions of lawmakers, a constitution, or in statutes.[64] According to Cicero, the idea of law "soars far higher, and comprehends the universal principles

59 Robinson, Daniel N, "*The Great Ideas of Philosophy, 2nd Edition,*" (The Teaching Company, 2004): Lecture 17. *Roman Law—Making a City of the Once-Wide World.*

60 Cicero, "*Treatise on the Laws (51 BC),*" (The Online Library of Liberty, Liberty Fund, Inc. 2005), page 19.

61 Ibid., page 23.

62 Cicero, "*On Government,*" (Penguin Classics, translated by Michael Grant, Epub, 1993), Chapter 4. On the State (III): The Ideal Form of Government.

63 Ibid., Chapter 4. On the State (III): The Ideal Form of Government.

64 Cicero, "*Treatise on the Laws (51 BC),*" (2005), page 19: "*...it is not in the edict of the magistrate, as the majority of our modern lawyers pretend, nor in the rules of the Twelve Tables of our Statutes, as the ancient Romans maintained, but in the sublimest doctrines of philosophy, we must seek the true source and obligation of jurisprudence.*"

of equity and law."[65] He then went on to rank what he called the "great moral law of nature," applicable to "all humans," above the "civil law," regulating "civic and municipal affairs," arguing that the latter cannot but occupy an "insignificant and subordinate station."[66] Cicero dismissed the notion that civil laws are automatically just as an "absurd extravagance," rhetorically asking, "Are then the laws of tyrants just, simply because they are laws?"[67] Law, he said, is neither excogitated by the genius of men nor is it anything discovered in the progress of society. It is a certain eternal principle, which governs the entire universe, wisely commanding what is right and prohibiting what is wrong.[68] The aim of the legislator, then, is not to make law but to align oneself with it.

Roman Pluriformity

Despite these noble ideas, humble living within the constraint of nature is of course not what Romans are known for. Despite notable examples of piety and temperance, Rome was at times awash with orgies of violence and the flesh. Members of the aristocracy competed in the building of palaces filled with exotic luxuries. Various emperors excelled solely in the excessive and creative ways they tormented those around them. Reading the words of philosophers provides a biased idea of the level of public discourse in antiquity. The average Roman—like the average Greek—was not engaged in philosophical debate. They were far more likely to worry about their families, gossip about their neighbors, think of ways to improve their standard of living, and excite themselves with bloody spectacles in the Colosseum.

The general population cared far more about religion than philosophy. It is, after all, easier being a believer than being a philosopher. Religions in the Roman Empire were as varied as its people. The Roman Empire had no official religion until its eventual adoption of Christianity. Moreover, not all philosophers agreed with Stoicism or a natural order. The Epicureans, for example, followed a materialist philosophy. They

65 Ibid., page 19:

66 Ibid., page 19: *"...the subject of our present discussion soars far higher, and comprehends the universal principles of equity and law. In such a discussion therefore on the great moral law of nature, the practice of the civil law can occupy but an insignificant and subordinate station. For according to our idea, we shall have to explain the true nature of moral justice, which is congenial and correspondent with the true nature of man. We shall have to examine those principles of legislation by which all political states should be governed. And last of all, shall we have to speak of those laws and customs which are framed for the use and convenience of particular peoples, which regulate the civic and municipal affairs of the citizens, and which are known by the title of civil laws."*

67 Ibid., page 28: *"the absurd extravagance in some philosophers to assert that all things are necessarily just, which are established by the civil laws and the institutions of the people. Are then the laws of tyrants just, simply because they are laws?"*

68 Ibid., page 39, [Author: edited for readability].

argued, similarly to Plato, that the pursuit of pleasure and avoidance of pain drives human behavior. Epicurus himself saw this seeking of pleasure as a sober and humble way of living without luxury,[69] comparable to the lifestyle of modern-day Buddhist monks—a fact most of his followers conveniently ignored.

For many people within the Roman Empire's framework, daily life proceeded in relative peace and prosperity. We are not conscious about it, because people living stable lives do not make for a good HBO series. Considerable segments of the empire's timeline lack historical records, hinting at the absence of exciting battles, political intrigue, and conquest. Just people living predictable lives under a predictable law.

Roman Law

> *"The basic principles of the law are these: to live honorably, not to injure any other person, and to render to each his own."*
> ~Ulpian

Roman law is central to the original concept of Roman citizenship, which was tied to rights, duties, and privileges (similar to Ancient Greece). A feature peculiar to Rome, however, was the automatic incorporation of freed slaves into the citizen body and the ease with which individuals and whole communities of outsiders could be admitted.[70] Among the rights and privileges of being a citizen in (Republican) Rome was active participation in Roman voting assemblies, whose decisions were legally binding. Moreover, no Roman citizen could be punished without a trial. Roman citizenship and being subjected to Roman law were a privilege and were desired enough by outsiders that they started rebellions to obtain it.[71]

The Roman legal system's uniqueness lies in its codification of a wide variety of novel legal concepts into written law. Roman law replaced arbitrary and ad hoc rulings with a set of rational precepts. These made life more predictable by clearly defining people's rights and duties. Rome was governed by principles, such as justice and

69 Strodach, George K., "*Epicurus - The Art of Happiness,*" (Penguin Books, Epub, 2012), VII. Ethics and the Good Life: "*Epicurus [...] disapproved, on principle, of sensuality, raw pleasure, and overindulgence.*" "*The good life for the Epicurean involves disciplining of the appetites, curtailment of desires and needs to the absolute minimum necessary for healthy living, detachment from most of the goals and values that are most highly regarded, and withdrawal from active participation in the life of the community, in the company of a few select friends—in a word, plain living and high thinking.*"

70 Boatwright et al. (2004), page 421, [Author: paragraph edited for readability]

71 Ibid., page 180, SOCIAL WAR (91–87)

liberty, that provided a framework for settling disputes through legal means rather than violence. The Romans not only established a rudimentary constitution and protected individual liberties, but they also distinguished between private, public, and criminal law. They introduced numerous legal concepts that we still use today. Roman law stands as one of the greatest achievements of Roman civilization.[72]

Central to Roman law remained the concept of natural law, or 'jus naturale,' which Roman jurists saw as more than a mere abstraction. It was the right law, the law appropriate to the individual and social nature of man, deduced not from a speculative void but from the general condition of mankind. The actual difference between 'jus gentium' and 'jus naturale' was for the Romans not considerable.[73] Notably, Ancient Rome had neither a police force nor a bureaucracy. Plaintiffs themselves were responsible for notifying the other parties, for ensuring their attendance in person for trial, and for collecting any judgments awarded.[74]

The Twelve Tables

Although Rome had no king, it had a hereditary elite. A strong divide existed between those of ancient birth, called the patricians, and the common folk, known as the plebeians or plebs. Like Greece, ancient rules and formalities applied exclusively to the original religious families. This left the growing number of plebs outside the protection of the law.[75] The patricians, considering themselves superior, maintained a monopoly on political positions. This led to the 'conflict of the orders,' essentially a class struggle.

A series of riots and controversies followed. In the most notable example, the plebs, who constituted the major workforce, simply walked out of the city, causing the city's basic functions to grind to a halt. The popular agitation led to the creation of a special commission of ten men in 450 BCE. These 'decemvirs' held supreme power for one year, during which they were to produce a body of laws to regulate the Republic. The eventual outcome of this process was the 'Laws of the Twelve Tables,' a text that would serve as a cornerstone of Roman law for centuries to come.[76]

The Twelve Tables were not a code as we know it today. Rather, they formed a rudimentary collection of specific provisions governing the everyday dealings

72 Robinson (2004): Lecture 17. *Roman Law—Making a City of the Once-Wide World.*

73 Lauterpacht (1950), 6. Function of Natural Law and the Rights of Man, page 99, [Author: made alterations for readability].

74 Boatwright et al. (2004), page 51.

75 Fusel de Coulanges (2001), page 262.

76 Boatwright et al. (2004), page 50, [Author: paragraph edited for readability]

of an early civilization. They contained guidelines for trials (I & II) and stipulated punishment and slavery for those who did not pay their debts (III). They confirmed the father as the absolute authority over children (IV) and set rules regarding inheritance and guardianship (V). Included are rules about ownership, engaging in private contracts, and contract enforcement (VI). Various clauses are included for disputes arising from adjacent properties (VII). They defined crimes as injustices against others, along with various exotic punishments, such as being thrown off the Tarpeian Rock for false testimony (VIII). The Tables introduced early concepts of public law (IX), including such prohibitions of laws passed to the benefit of individuals, the stipulation that no Roman citizen was to be put to death without a trial, and capital punishment for those taking bribes (IX). The Tables finally included provisions on religious rites (X) and rules on damages caused by slaves (XII).[77]

Although the Twelve Tables laid the foundation, Roman law continued to evolve along with the empire and its political system. The Roman executive included a variety of officials. Of these, the praetors most often heard testimony and issued judgments. They would come to exercise a great deal of influence over how private disputes between citizens were resolved.[78] The Roman Senate played an active role in matters of religion, public finances, receiving embassies from both allies and enemies, and military assignments.[79] Later, emperors began issuing their edicts. These various rulings and meetings contributed to a growing body of law. In addition, jurists produced specialized works on various offices. For instance, Ulpian authored ten volumes on the duties of a provincial governor.[80]

Justinian

The Roman Empire absorbed large swaths of Greek territory. This resulted in an empire divided along two main cultural lines: the Hellenistic East and the Latin West. Eventually, this cultural divide led to a formal split of the Roman Empire into two administrative entities: the Western Roman Empire and the Eastern Roman Empire, the latter now known as the Byzantine Empire. While the Western Roman Empire succumbed to increasing barbarian attacks, the Byzantine Empire endured until 1453, when Islamic forces conquered its capital, Constantinople (modern-day Istanbul). This is significant because Roman law and institutions persisted beyond what most people consider the fall of Rome. It is in fact from the Eastern Roman Empire where we get our most elaborate and detailed understanding of Roman

77 "*The Twelve Tables,*" (Gutenberg Project, translated Paul R. Coleman-Norton, release Jan 24, 2005), https://www.gutenberg.org/cache/epub/14783/pg14783.html

78 Boatwright et al. (2004), Chapter 3, officials.

79 Boatwright et al. (2004), Chapter 3, Senate.

80 Boatwright et al. (2004), page 416.

law, due to the efforts of Emperor Justinian. A native Latin speaker of considerable culture who was steeped in Rome's history and had profound respect for Roman law, Justinian regarded it as his life's mission to restore the glories of the Roman Empire and to deliver the city of Rome from barbarian servitude.[81] He reconquered Rome and a large part of the original empire, though he never restored it to its original size (or grandeur).

More of interest for our discussion is Justinian's initiative to compile a complete overview of Roman law, the *Corpus Juris Civilis*. This compilation became the foundation for modern civil law and, as we will explore in later chapters, proved highly influential in common law jurisdictions as well. The central work, the *Institutes*, provides a clear overview of the fundamental principles of Roman law. It starts by making a distinction between two branches of law: public and private. The former relates to the welfare of the Roman state, the latter to the advantage of the individual citizen.[82] It states the fundamental precepts of law as "to live honestly, to injure no one, and to give every man his due."[83]

It observes that there are three origins of laws: the precepts of nature, the law of nations, and the civil law of peculiar peoples. The law of nature is a law observed by all nations alike and fixed and immutable. Civil laws proclaim those rules which a state enacts for its own members and are "peculiar to itself." The law of nations, derived from natural law, governs interactions between nations since those rules are "prescribed by natural reason" and "observed by all peoples alike."[84]

The *Institutes* codified a range of enduring legal concepts. These included the division of private and public ownership, rules governing the ownership of wildlife and semifinished goods, and a differentiation between 'tangible' and 'intangible' rights, such as inheritance and usufruct. It addressed property rights of 'bona fide' purchasers; laws on gifts, inheritance, and testaments; and the appointment of trustees. Furthermore, it covered various forms of contracts and obligations, early versions of labor laws, shared liability in partnerships, and tort laws. The text also established penalties for reckless litigation and laid out laws on defamation and oath-taking.[85]

81 Walsh, P.G., "*Boethius, The Consolation of Philosophy, Oxford World's Classics,*" (Oxford University Press, 1999, Epub), [Author: this section is from the introduction, and not the words of Boethius].

82 Justinian, "*The Institutes of Justinian,*" (Gutenberg Project, translated by J.B. Moyle, released April 11, 2009, last updated: February 6, 2013, Epub), TITLE I. Of justice and Law.

83 Ibid., TITLE I.

84 Ibid., TITLE II. Of the Law of Nature, the Law of Nations, and the Civil Law.

85 Ibid., TITLE II. [Author: this paragraph is an extract I made of various articles].

The provisions in Justinian's *Institutes* primarily offered broad guidelines on what could and could not be done. They can be seen as law empowerment, expressed in a division of the rights and duties of equals. As a result, they offered private individuals significant freedoms in making their own legal arrangements. Unlike modern legal codes, the *Institutes* did not provide exhaustive details or enforce policy goals through strict regulations. Drawing on centuries of legal rulings, the *Institutes* addressed many common sources of dispute in daily life. These included issues such as the ownership of fruit falling onto a neighbor's land, the rights to collect rainwater, and the ownership of offspring from animals with different owners.[86] Many of these laws could regulate rural Southeast Asia today, a testament to the ability of Romans to regulate human beings according to their nature and not an ideal. The *Institutes* interestingly contained the concept of property common to all, such as the air, running water, and the sea and seashore.[87] The idea of the freedom of the seas is often attributed to Hugo Grotius, yet he wrote on this topic a millennium later. Section III of this book examines the application of this concept to decentralized networks.

Influence of Roman Law

The Eastern Roman Empire remained governed by the *Corpus Juris Civilis* until its demise. Greek influence had long been a crucial element of Roman high culture. By Justinian's time, legal practice had evolved into a bilingual system. This allowed the predominantly Greek-speaking Byzantine legal scholars to practice law effectively, even with limited Latin proficiency.[88] As Latin fell out of use and its complex legal terminology became increasingly challenging, a Greek version of the *Institutes*, known as the *Basilica*, eventually became the central body of law. The *Basilica* remained highly influential in the Greek world. It even regained statutory force when in 1821 the Greeks fought for independence from the Ottoman Empire and they adopted the code of their Byzantine forefathers to be their own law.[89]

86 Ibid., Book II, I. Of the different kinds of Things.

87 Ibid., Book II, I.

88 Corcoran, Simon, "*Roman Law and the Two Languages in Justinian's Empire,*" (Bulletin of the Institute of Classical Studies 60, no. 1, 2017), https://www.jstor.org/stable/48554547, page 115-116: "*The two language traditions diverged. Clearly under Justinian, highly competent legal professors and professionals were able to engage with both Greek and Latin, reading, interpreting, teaching, and composing. Thereby, they not only saved the Latin corpus of Roman law in the long term, but also developed a fixed legal vocabulary in Greek. Yet, the wide range of Greek teaching materials, including the kata poda crib, could enable a Greek-speaking student at say, Beirut, who then became a practising advocate, to survive on very little Latin, provided he learnt enough of the technical terminology, which could even be naturalized by transcription into Greek, if necessary.*"

89 Sherman, Charles P., "*The Basilica - A Ninth Century Roman Law Code Which Became the First Civil Code of Modern Greece a Thousand Years Later,*" (University of Pennsylvania, 66

The influence of the *Corpus Juris Civilis* extended to Western Europe as well. The barbarians who conquered Rome recognized the effectiveness of Roman law in governing a vast empire. Consequently, they attempted to maintain Roman legal institutions and traditions to the best of their ability. Throughout the Dark and Middle Ages, various rulers sought to emulate Rome's prestige by adopting aspects of Roman law. This tradition rose to significance on December 25, 800, when Charlemagne's imperial coronation in Rome by the pope symbolically restored the Ancient Roman Empire in the West. In 1495, Holy Roman Emperor Maximilian I established a central court for his vast empire. This territory encompassed territories in modern-day Germany, the Czech Republic, Slovakia, Austria, Hungary, Italy, and the Netherlands. This imperial tradition helped with the 'reception' of Roman law because in theory the restoration of the empire in the West likewise involved the restoration of the authority of Roman law.[90]

The influence of Roman law persisted in various jurisdictions. For instance, the Court of Friesland in the northern Netherlands administered justice based on Roman-Dutch law until 1809. Similarly, in Scotland, King James IV established the Court of Session in 1532, which continues to this day to administer justice based on a combination of local customary law and Roman law.[91] Moreover, as we will explore in subsequent chapters, Roman legal scholars provided the philosophical foundation for Christian legal scholars, Enlightenment thinkers, and the authors of the American Constitution. Throughout Europe, Roman law remained a fundamental component of legal education well into the modern era. Even in England, Roman law was taught in universities before their local common law (eighteenth century).[92]

Throughout human history, no other legal system has exerted as long-lasting, widespread, and profound an influence as that of Rome.[93] In a sense, the Roman legal system never disappeared; it evolved into the legal systems we use today. The Roman legal system serves as an enduring foundation upon which civilization continues to build. In the realm of law, it holds a position analogous to that of the

	U. Pa. L. Rev. 363, 1918), https://scholarship.law.upenn.edu/penn_law_review/vol66/iss4/4
90	Zwalve, W.J., "*Beknopte geschiedenis van het Romeinse recht,*" (Boom Juridische uitgevers, Den Haag, 2004), page 2.
91	Ibid. page 3.
92	Blackstone, William,"*Commentaries on the Laws of England – Book the First (1765),*" (Lonang Institute, Electronic Edition 2005), Sect. 1: On the Study of the Law. [Author: he discussed a number of reasons why common law is not thought at English universities: the banning of it by the Pope, the civil law being in fashion, the benefit of its elegant precepts for the education of a gentleman, the fact that most universities teach in Latin, and the common law not being committed to writing].
93	Zwalve, (2004), page 1.

Bitcoin genesis block in blockchain technology: a fundamental starting point from which all subsequent developments emerged.

§ 2.3. Christian Natural Law

> *"The Human Race is ruled by two things: namely, natural law and its usage. Natural law is what is contained in the law and the Gospel. By it, each person is commanded to do to others what he wants done to himself and is prohibited from inflicting on others what he does not want done to himself."*
> ~Decretum of the Catholic Church (ca. 1140)

The immediate aftermath of the Western Roman Empire's fall ushered in a period of significant cultural upheaval. A blanket of kingdoms replaced the complex empire. The ideals of Rome made way for Christianity. Architecture, philosophy, and political ideas—all of it gave way to more traditional ways of life and simpler ways of looking at the world. This period of cultural transition is sometimes referred to as the Dark Ages, though throughout this period we saw more egalitarian ideas gradually emerge from the old system of hierarchy, conquest, and slavery.

Churchmen, one of the few remaining groups capable of reading and writing, kept Roman knowledge alive by copying precious writings by hand. The ideas of Roman law, so widely respected and comprehensive, remained perceived as a logical foundation for a legal system, especially when contrasted to a contemporary life devoid of refined ideas of governance other than the will of a single individual.[94] Not entirely unsurprising, Christian scholars incorporated Roman legal ideas into the official doctrine of the Roman Church and thus helped propagate them in Europe—and later around the world. Christians embraced the idea of natural law, which was considered an order instilled into humans by God. Christian scholars such as Augustine and Aquinas synthesized this perceived order into a comprehensive doctrine of applicable natural law.

94 Heather, Peter, "*The Fall of Rome,*" (BBC History, February 17, 2011), accessed on May 9, 2024, https://www.bbc.co.uk/history/ancient/romans/fallofrome_article_01.shtml

Saint Augustine

> *"The measure of order lives in the eternal truth; it is disturbed neither by the masses nor by the course of temporal events."*
> ~Saint Augustine[95]

Saint Augustine of Hippo (354–430), served as a crucial bridge between classical Roman thought and emerging Christian philosophy. Originating from northern Africa, living through the dying days of the Western Roman Empire, Augustine's ideas and writing might indeed be called a great funnel through which the philosophical erudition of antiquity could safely flow into the orbit of Christianity.[96] A devout Christian himself, he considered the ideas of 'pagan' Roman philosophers to be in line with the faith. Romans held a pantheistic view of natural law, identifying cosmic reason with God, God with nature, and nature with the individual. In this framework, one's own reason is only a manifestation of the universal cosmic reason which, as an impersonal cosmic principle, is one and the same with the individual and the universe.[97]

Saint Augustine could not identify the cosmic reason and rational orderliness with God himself. Instead, he declared the 'eternal law' an act of God. He then defined the lex aeterna as "that law which justifies, or is at the bottom of, the most perfect orderliness," in other words, the inner justification of the order of all things.[98] Augustine described the lex aeterna as "the Divine Intellect and the Will of God which commands us to observe the natural order, and forbids us to disturb it."[99] The lex aeterna, however, is not only "eternal and immutable" but also "all-encompassing;" it governs "all of creation without exception, and every creature is subject to it."[100]

Natural law, then, according to Augustine, is the conscious participation of rational man in the lex aeterna. He understood lex naturalis, above all, as the law of reason. This natural law is imprinted or impressed on man's soul or heart. Consequently, it imprints the lex aeterna on his rational soul. The fundamental precepts of natural law are known to all men capable of right reasoning, no matter how depraved they may be. This is because God, who wrote the lex naturalis into the hearts of men,

95 Chroust, Anton-Hermann, "*St. Augustine's Philosophical Theory of Law,*" (Notre Dame Law Review, Volume 25|Issue 2, Article 3, February 1st, 1950), page 296.
96 Chroust (1950), page 285
97 Ibid., page 288.
98 Ibid., page 292.
99 Ibid., page 293.
100 Ibid., page 296.

speaks to everyone. Hence, no one, not even the heathens, can plead ignorance of the lex naturalis. Their moral conscience, which can never be silenced, is their law as well.[101]

Augustine argued that natural law transcends personal opinion because it is inscribed in the hearts of man and the intellect of those who already make use of their free will. Justice represents the realization of universal order and rational compliance with it. Injustice is the absence of a right conception of this universal order, and evil is man's willful disturbance of it.[102] At its core, St. Augustine's writing emphasized two central moral concepts: to render to everyone his due and to do nothing unto another you would not have done unto yourself.[103] He further argued that a good and wise lawgiver will always shape his laws after the lex aeterna, the absolute and eternal model of all that might be called lawful and just. Augustine made an even more radical assertion: all human laws which are not derived from or sanctioned by the lex aeterna are unjust, and in principle, we should refrain from abiding by them.[104] Unjust laws are not laws.

> *"In the absence of justice, what is sovereignty but organized robbery?"*
> ~Saint Augustine

Saint Thomas Aquinas

Augustine's theistic definition of the lex aeterna became the foundational and authoritative concept for medieval jurisprudence. Italian Dominican friar and priest Thomas Aquinas (1225–1274) fully adopted and further elaborated on this concept. His treatise is considered the first truly systematic and comprehensive treatment of natural law in the Middle Ages.

Aquinas lived during a pivotal moment in Western culture. The reemergence of Latin translations of Aristotle's works reopened the debate on the relationship between faith and reason, challenging centuries-old ways of thinking. Like Aristotle, he observed that humans are part of a society and have a natural tendency to do good in this society. This good is achieved through right moral actions and the pursuit of virtue. This striving for good is a natural tendency: a natural law.[105]

101 Ibid., page 301.
102 Ibid., pages 303-304.
103 Ibid., pages 306.
104 Ibid., pages 306-307.
105 "*Saint Thomas Aquinas,*" (Stanford Encyclopedia of Philosophy), accessed on March 9, 2023, https://plato.stanford.edu/Archives/spr2004/entries/aquinas/ [Author: this paragraph is a general interpretation of the original article. Thas article has since been archived, and

Aquinas is renowned for his substantial work, *Summa Theologica*, which is widely cited as the foundation of modern natural law. He distinguished between four kinds of law, each playing a distinct role in guiding right human action. He identified eternal law as the plan of divine wisdom, directing all acts and movements. Natural law, in his view, is the distinctive way rational beings participate in the eternal law. Human law comprises particular developments of natural law worked out by human reason. Finally, divine law consists of divinely revealed laws (or divine revelations).[106]

This division of law builds on the distinction made by Augustine. We see, however, the addition of human and divine law. Human law is needed, he argued, because it is better for things to be regulated than left to individual judges' discretion. After all, it is easier to find a few wise men capable of framing the right laws than to find many wise judges. Furthermore, framers of laws have more time to consider what is to be enacted. And finally, those judging in real time risk falling victim to the passions and see their judgment warped.[107] Natural law, however, serves as the standard against which we can determine whether human-imposed laws are just.[108]

As to the question of why divine law is needed if we already have natural law, Aquinas argued that there is uncertainty in human judgment, especially on particular matters. This uncertainty, he contended, leads to the emergence of many different and often contradictory laws. Moreover, laws can only act upon exterior acts, not internal thoughts and intentions, which remain hidden. Divine laws can help restrict and direct interior acts. Moreover, human law cannot become so restrictive that it prevents or punishes all evil things; the general public would be impeded by such

	replaced with an updated one]
106	*"Thomas Aquinas,"* (Stanford Encyclopedia of Philosophy, Dec 7, 2022), accessed on March 9, 2023, https://plato.stanford.edu/entries/aquinas/#NatuLaw [Author: I replaced the definition of eternal law with that from the Summa Theologica itself, because I think it is a better fit, and I refined the definition of divine law to capture its complete meaning].
107	Aquinas, Thomas, "*Aquinas Ethicus: or, the Moral Teaching of St. Thomas. A Translation of the Principal Portions of the Second part of the Summa Theologica, with Notes by Joseph Rickaby, S.J.*" (London: Burns and Oates, 1892), QUESTION XCV. OF HUMAN LAW: "*The Philosopher says: "It is better for all things to be regulated by law than to be left to the judges' discretion;" and that for three reasons. First, because it is easier to find a few wise men capable of framing right laws, than to find the many who would be requisite to judge rightly of particular cases. Secondly, because the framers of laws consider long beforehand what is to be enacted: but judgments are framed on particular facts from cases that have arisen on a sudden. Now it is easier to see what is right from the consideration of many instances than from one only. Thirdly, because lawgivers judge in the general and with an eye to futurity: but men sitting in judgment judge of the present, which they regard with love or hate or other passion; and thus their judgment is warped."* [Author: common law advocated argue the exact opposite].
108	"*Natural Law,*" (Thomistic Philosophy), accessed on March 9, 2023, https://aquinasonline.com/natural-law/.

a restrictive society. So that no evil might go unpunished, a supervening divine law was installed so that all sins are prohibited.[109]

Aquinas opined that more specifically described laws tend to result in greater disagreement. He reasoned that the more general a precept is, the less it is open to exceptions.[110] He further added,

> *"A human law bears the character of law so far as it is in conformity with right reason; and in that point of view it is manifestly derived from the Eternal Law. But inasmuch as any human law recedes from reason, it is called a wicked law; and to that extent it bears not the character of law, but rather of an act of violence."*[111]

Aquinas's writings reveal his substantial reliance on authoritative Roman sources. He appears to have had no doubt the validity of the broad body of knowledge derived from Roman legal practice. This reliance on Roman legal thought extended beyond Aquinas to other medieval scholars as well. A striking continuity of thought exists between the Stoics and the most representative political literature of the Middle Ages. Both affirmed the principle of a higher law—the law of nature—as the source of all law. For example, the view that the ruler is under the supremacy of the law was the principal feature of the political theory of the Middle Ages. The law of nature was realized as a higher law superior to the state or its representatives.[112] But these were not the only Christian contributions.

Assembling a Body of Law

Berman explains that for the peoples of Europe before the eleventh century, law did not exist as a distinct body of rules and concepts or as a distinct system of thought. There were no law schools. No great legal texts existed that dealt with basic legal categories like jurisdiction, procedure, crime, contract, and property (subjects elemental to later Western legal systems). There were no developed theories of the sources of law, of the relation of divine and natural law to human law, of ecclesiastical law to secular law, of enacted law to customary law, or of the various kinds of secular law—feudal, royal, urban—to one another.[113]

The great treatise by the Bolognese monk Gratian, *A Concordance of Discordant Canons*, written around 1140, served as a primary source for the formation of legal

109 Aquinas (1892), QUESTION XCI. OF THE VARIETY OF LAWS. [Author: summary of the most important arguments].

110 "*Natural Law,*" (Thomistic Philosophy)

111 Aquinas (1892), QUESTION XCIII. OF THE ETERNAL LAW, Article III.

112 Lauterpacht (1950), 4. The Middle Ages, page 84-85.

113 Berman (1983), page 85.

science. This work, which in a modern edition fills over 1,400 printed pages, was the first comprehensive and systematic legal treatise in the history of the West, and perhaps in the history of mankind.[114] Moreover, the system of canon law, as conceived by Gratian, rested on the premise that a body of law is not a dead corpse but a living corpus, rooted in the past but growing into the future.[115] Through the efforts of the Catholic Church, law emerged as an independent body of knowledge, developing to this day.

Rights of the Individual

When talking about the influence of Christianity on law, one cannot ignore individual rights. According to British philosopher Larry Siedentop (1936–2024), the Christian religion shifted the focus from family structures to the equality of all souls. Siedentop contended that Christianity presented God as endowing individuals with both rationality and moral agency. This idea of free will was novel at the time, as was that of a God who did not enter into human affairs but instead was able to leave them be and forgive their sins. Christianity encouraged the development of a private sphere for each person beyond the control of political rulers or the clan, taking the first steps toward real freedom of conscience.[116]

This influence clearly shows in Jefferson's Bible, Thomas Jefferson's attempt to extract Jesus's moral teachings by excluding from the Bible all the miracles and references to the supernatural. The resulting text presents a set of moral teachings deeply intertwined with Western culture. A recurring parable is that of the single lost sheep,[117] through which Jesus emphasized the value of the individual. After all, Jesus argued that each person has the innate ability to access the Kingdom of God inside themselves. Consequently, the concept of viewing the individual as separate from the collective and worthy of rights and respect originates from the Christian world, which continued to reflect upon and develop these teachings and formalize them into law.

For instance, certain Spanish Christian monks attempted to provide a moral compass and limit the ongoing atrocities during the colonization of the Americas.[118]

114 Berman (1983), page 143.

115 Berman (1983), page 202-203.

116 Virgos, Tirso, "*Book Review – Larry Siedentop, Inventing the Individual,*" (Liberal Read, No 29, August 2023).

117 Jefferson, Thomas, "*The Life and Morals of Jesus of Nazareth, Extracted Textually from the Gospels Greek, Latin, French, and English,*" (Government Printing Office, Washington, 1904, Epub), take for example Chapter 7: "*How think ye? if a man have an hundred sheep, and one of them be gone astray, doth he not leave the ninety and nine and goeth into the mountains, and seeketh that which is gone astray?*"

118 Author: It is true that the arguments developed by Christian monks opened up the door to

Bartolomé de las Casas (1484–1566) provides an example of this effort. His work, *A Short Account of the Destruction of the Indies*, informed people in Spain about the atrocities being committed in their name and the name of their faith.[119] De Las Casas tirelessly advocated for the rights of Indians through his writings, public debates, and court appearances. His efforts contributed to the establishment of the "New Laws,"[120] aimed at preventing the exploitation and mistreatment of indigenous Americans. De Las Casas based his convictions on Thomistic natural law,[121] arguing for its applicability to all human beings, not solely Christians or Europeans.

However, the concept of the individual, as advocated by German priest Martin Luther (1483–1546), would become central to the development of modern property and contract law. According to Berman, this concept stemmed from the power of the individual to change nature and to create new social relations through the exercise of his will.[122] For centuries, both the church and mercantile communities had developed elaborate and sophisticated property and contract laws. But in Lutheranism, its focus changed: nature became property, economic relations became contract, and conscience became will and intent.[123] This framework laid the foundation for the eventual separation of law and religion.

further studies on individual liberty and national equality before international law in Europe. Yet, they just as easily justified the secondary treatment of Indians. Examples can be found in the work of influential Salamancan monk De Vitoria]. Vitoria, Francisco de. "*On the American Indians,*" (Cambridge Texts in the History of Political Thought, "Vitoria: Political Writings," edited by Anthony Pagden and Jeremy Lawrance,Cambridge University Press, 1991), pages 290-291: "*In this respect, there is scant difference between the barbarians and madmen; they are little or no more capable of governing themselves than madmen, or indeed than wild beasts. They feed on food no more civilized and little better than that of beasts. On these grounds, they might be handed over to wiser men to govern.*" Page 291: [ceasing the Indian expedition and trade] "*would mean a huge loss to the royal exchequer, which would be intolerable.*" Page 292: "*...once a large number of barbarians have been converted, it would be neither expedient nor lawful for our prince to abandon altogether the administration of those territories.*"

119 De Las Casas, Bartolomé, "*A Short Account of the Destruction of the Indies,*" (Penguin Books, London & New York, 1992), page 3, Synopsis.

120 Brennan, Marie George, "*Las Casas and the New Laws,*" (Revista de Historia de América, no. 61/62, 1966), http://www.jstor.org/stable/41307331.

121 Schuster, Edward James. "*Juridical Contributions of Las Cases and Vitoria,*" (Revista de Historia de América, no. 61/62, 1966), https://www.jstor.org/stable/41307338, page 145.

122 Berman (1983), page 29.

123 Berman (1983), page 29-30.

§ 2.4. The Enlightenment

> *"Every man has a property in his own person. This nobody has a right to, but himself."*
>
> ~John Locke

In 1617, Roman Catholic officials in Bohemia, currently situated in the Czech Republic, made the unpopular decision to halt the construction of Protestant chapels. At that time, most of Europe was subject to the Holy Roman Empire, which did not welcome competition. However, for a large share of European Christians, the Roman Catholic Church had become synonymous with decadence and corruption. They sought a more sober and Bible-centered interpretation of the faith. Included in this group were the Bohemian Protestants, who demanded greater religious liberty, which Emperor Rudolf granted in the Letter of Majesty in 1609. The closing down of the construction sites, contrary to promises made, prompted the Protestants to call an assembly in Prague. There, the imperial regents were summoned, tried, and found guilty of violating the Letter of Majesty. However, rather than arresting them as customary, the frenzied crowd took matters into their own hands. They seized the regents and their secretary, Fabricius, and threw them out of the windows of Castle Hradčany on May 23, 1618. Although the victims survived, that act, known as the 'Defenestration of Prague,' signaled the beginning of a Bohemian revolt against the emperor and symbolized the start of the Thirty Years' War.[124]

The Thirty Years' War turned out to be an extremely bloody one. It involved nearly all the different kingdoms and principalities in Europe, each fighting to gain independence, increase their holdings, or settle old scores. Large mercenary armies roamed the countryside, alternately waging battles and plundering the helpless population. The resulting economic malaise, disease, and famine resulted in millions of deaths. In certain areas of what is now modern Germany, the population declined by 50 percent in the countryside and 40 percent in the towns. No clear winner emerged, and the war was concluded in 1648 by the Peace of Westphalia.[125] By limiting the power of both empire and church, Westphalia is viewed as marking the emergence of the nation-state as we know it today: a sovereign source of laws and rights within a single territory.

124 "*Defenestration of Prague, 1618,*" (Encyclopedia Britannica), accessed on May 9, 2024, https://www.britannica.com/event/Defenestration-of-Prague-1618

125 Wedgwood, C.V.,"*The Thirty Years War,*" (The Bedford Historical Series, 1944).

Legal Enlightenment

Legal philosophers, often victims of religious persecution themselves and witnesses to the destructive power of religious animosity, realized the inherent danger of basing a country's administration solely on religious dogma. Thus, as Europe entered the early modern period, the changing intellectual landscape resulted in innovative readings of the law. Approaching natural law from a position of reason was now seen as a necessity for societal cooperation despite religious differences. In addition, the conviction emerged that natural law led to a reciprocal distribution of rights and duties for all human beings. This concept of equal rights and duties shaped the legal system of the European nations. All-powerful religious and imperial structures were limited by the sovereignty of the state and the liberty of the individual—a liberty granted under natural law.

Hugo Grotius (1583–1645) was fundamental in this process. This Dutch lawyer and legal scholar, whom we will explore further in our chapter on international law, laid the bedrock for legal thought for centuries to come. In his book *The Rights of War and Peace*, he defined various legal concepts such as natural law, the law of nations, and the civil law[126] and that of individual rights.[127] However, most of the principles in his work were not invented but rather collected. His work is extensively (and tirelessly) footnoted with ideas from Roman legislators and Christian philosophers, such as Aquinas, and Spanish and Italian legal scholars. He wove all this knowledge into a body of work with well-thought-out definitions, applying it directly in his legal practice. The ideas in his foundational works were studied by future scholars and formalized by statesmen.

Grotius did not think that law, politics, and ethics were separate domains. A fundamental tenet of his thought is that moral, political, and legal norms are all based on laws derived from or supplied by nature.[128] Moreover, he moved away from religious interpretations and argued that a study of human nature suffices to teach us the essentials of ethics, politics, and law. After all, the "Will of God" is not only revealed through oracles and supernatural portents but can be discovered in the design itself.[129] He emphasized that every individual is created so that his actions and the use of his possessions are made subject to no will but his own.[130]

126 Grotius, Hugo, "*The Rights of War and Peace,*" (Liberty Fund, Indianapolis, from the Jean Barbeyrac edition, 2005), Preliminary discourse

127 Ibid., Book I, Chapter 1: What War is, and what Right is.

128 "*Hugo Grotius,*" (Stanford Encyclopedia of Philosophy, Jan 8, 2021), accessed Feb 4, 2024, https://plato.stanford.edu/entries/grotius/.

129 Ibid.

130 Grotius, Hugo, "*Commentary on the Law of Price and Bounty,*" (Liberty Fund, Indianapolis, Edited and with an Introduction by Martine Julia van Ittersum, 2006), Chapter II, Prolegomena, Including Nine Rules and Thirteen Laws, page 33.

The English philosopher Thomas Hobbes (1588–1679) aligned with the idea that natural law is discovered through reason and should guide a man's life. He argued that natural laws are immutable and eternal.[131] He astutely observed that when natural law makes each man equal and at the same time entitles each man to everything he wishes, there can be no security for any man.[132] Naturally, it shall be necessary for the individual to lay down his right to all things and be content with so much liberty against other men as he would allow other men against himself.[133] One has to exchange equal rights to everything for equal liberty before the law. The latter can be seen as an expression of the golden rule to "do not that to another which thou thinkest unreasonable to be done by another to thyself."[134]

Influential English philosopher John Locke (1632–1704) expanded on the idea of a natural state governed by natural law. According to him, men are in a state of perfect freedom to order their actions and dispose of their possessions and person as they think fit, without asking leave or depending on the will of any other man, only within the bounds of the law of nature.[135] However, a law of nature governs this state of nature which teaches mankind that, being all equal and independent, no one ought to harm another in his life, health, liberty, or possessions.[136] As such, every human being may also not, unless it be to do justice to an offender, take away or impair the life, liberty, health, limb, or goods of another.[137]

He quoted Richard Hooker, a sixteenth-century English theologian, to explain how natural laws

> *"do bind men absolutely, even as they are men, although they have never any settled fellowship, never any solemn agreement amongst themselves what to do, or not to do; but forasmuch as we are not by ourselves sufficient to furnish ourselves with competent store of things, needful for such a life as our nature doth desire, a life fit for the dignity of man."*[138]

Locke concluded that the natural liberty of man is to be free from any superior power on earth, not to be under the will or legislative authority of man but to have

131 Hobbes, Thomas, "*Leviathan,*" (Project Gutenberg, Epub, July 2, 2002, Most recently updated: March 27, 2021), CHAPTER XIV – Of the First and Second Natural Laws, and of Contracts; The Laws Of Nature Are Eternal;

132 Ibid., CHAPTER XIV; Naturally Every Man Has Right To Everything

133 Ibid., CHAPTER XIV; The Second Law Of Nature

134 Ibid., CHAPTER XIV; Lawes Are All Of Them Lawes Of Nature

135 Locke, John, "*Two Treatises of Government,*" (The Federalist Papers Project, eBook, 1680), Chapter II – Of the state of nature, § 4.

136 Ibid., Chapter II – Of the state of nature, § 6 [Author: edited for readability].

137 Ibid., Chapter II – Of the state of nature, § 6 [Author: paragraph edited for readability].

138 Ibid., Chapter II – Of the state of nature, § 15 [Author: paragraph edited for readability].

only the law of nature for his rule. Moreover, the liberty of man, in society, is to be under no other legislative power but that established by consent.[139] Having said this, no society can exist without the power to preserve itself. There only is political society, where every one of the members has resigned his natural power to the hands of the community in exchange for the protection of the law established by it.[140] There is no such thing as unlimited individual rights within a political society.

German legal scholar Samuel Pufendorf (1632–1694) played a major role in developing natural law theory. He saw natural law as more than a source of individual liberty. Primarily, he viewed it as a source of duty to other human beings, aimed at achieving a society of equality. He likewise started from the foundation of natural liberty. By this, he meant that every man exists in his own right and power and is not subject to anyone's authority without a preceding human act. Every man is held to be equal to every other (there is no relationship of subjection).[141] In addition, there are certain laws, such as divine and natural laws, that clearly cannot have arisen from the agreement or consent of men.[142] He emphasized that there are certain actions so fundamentally natural that they are beyond questions of morality—and therefore beyond law.[143] Examples of this are breathing, eating, and sleeping.

Pufendorf argued that natural law dictates that men are made to cultivate society among themselves. It stipulates that no one at all ought to bring upon a second person that which can furnish a cause for discord and war.[144] He offered a Christian interpretation of the main obligations under natural law, and that is to love God and love your neighbor. The whole natural law may be derived from these principles in man's corrupt, as well as in his uncorrupt, state.[145] He concluded that from natural law stems duties of doing what is right and omitting what is wrong. Knowledge of this distinction comes from reason, life in civil society, and divine revelation. From this knowledge flow the duties to cultivate living in fellowship with other men and to adjust to live as a member of a particular community.[146]

139 Ibid., Chapter IV – Of slavery; § 22.

140 Ibid., Chapter IV – Of slavery; § 87, [Author: edited for readability].

141 Pufendorf, Samuel, "*On the Duty of Man and Citizen According to Natural Law,*" (Cambridge University Press, Cambridge, 1991), Book II, Chapter I, On men's natural state, page 117.

142 Pufendorf, Samuel, "*Two Books of the Elements of Universal Jurisprudence,*" (Liberty Fund, 2009, Translated by William Abbott Oldfather, 1931, revised by Thomas Behme), Book I, Definition XIII, page 203.

143 Ibid., Book I, Definition I, page 23.

144 Ibid., Book I, Definition XIII, page 216.

145 Pufendorf, *"On the Duty of Man and Citizen According to Natural Law,"* (1991), Preface, page 11.

146 Ibid., Preface, page 7.

Natural Rights

One of the lasting contributions of the Enlightenment thinkers was their transformation of natural law ideas into a theory of natural rights. How they came to this conclusion deserves deeper exploration. As explained later in this chapter, these ideas directly influenced the structure of our current legal systems. They are considered one of the most crucial aspects of legal systems today and, as discussed in Section III, the Decentralized Legal System of the future.

It was, again, Hugo Grotius who formed a foundation of what we nowadays consider rights. His most notable contribution was that he argued rights are a capacity or power possessed by the agent. To have a right means to have the power to pursue our own interest without needing the permission or assistance of the state or any other authority.[147] Man was born as a sovereign and free individual who could execute his own right.[148] He further introduced the notion of subjective rights, turning them into powers or faculties possessed by the individual. And as the 'owner' of these rights, one is able to trade these rights away just as with other possessions.[149] As such, an individual is then able to deliver up themselves to some one person, or to several persons, and transfer the right of governing them upon him or them, not retaining that right for themselves.[150] He argued that people may give their rights to a ruler, receiving a peaceful and stable society in return.[151] He concluded that the power of the state is derived from private individuals in collective agreement.[152] As such, Grotius laid the groundwork for what is now known as the social contract. This contract involves the formal or tacit acceptance of a pact, through which one attaches oneself to a commonwealth.

Grotius added that the transfer of rights—like the sale of property—was permanent and could not be reversed. But at the same time, he introduced the idea that certain rights or powers might be withheld by the grantors—meaning the people—or certain conditions imposed onto the grantee.[153] This concept is reflected in modern constitutions, where the authority of the state is limited by certain essential rights, retained by the individual to live a life of self-determination. According to Grotius,

147 "*Hugo Grotius,*" (2021).

148 Grotius, "*Commentary on the Law of Price and Bounty,*" (2006), Introduction, page xviii. [Author: from the introduction written by for the editor]

149 "*Hugo Grotius,*" (2021).

150 Grotius, "*The Rights of War and Peace,*" (2005), Book I, Chapter 1: What War is, and what Right is, page 261

151 "*Hugo Grotius,*" (2021).

152 Grotius, "*Commentary on the Law of Price and Bounty,*" (2006), Chapter VIII – Forms in Undertaking and Waging War, page 137.

153 Neff, Stephen C., "*Hugo Grotius on the Law of War and Peace,*" (Cambridge University Press, UK, 2012), Introduction, page XXX.

certain rights are essential to human life, such as the right of self-defense.[154] Another example is the right of barter to obtain those goods that nature lacks. To properly meet his needs, one may not be deprived of that privilege by any person.[155] Eventually, he made a distinction between rights attached to persons and those to objects, such as a piece of land.[156]

Pufendorf derived his ideas about rights from perceived duties under natural law. He considered the most important duty not to harm others, meaning killing, wounding, beating, robbery, theft, fraud, and other forms of violence, whether inflicted directly or indirectly, in person or through an agent.[157] Moreover, we all have the duty to treat each other as equals, with equal rights and duties before the law.[158] Another major duty is for each man to have another man enjoy his property rights.[159] Furthermore, Pufendorf argued that every man ought to do as much as he can to cultivate and preserve "sociality."[160]

Emmerich de Vattel (1714–1767), an influential Swiss legal philosopher, expanded on the idea of natural rights, which he saw as originating from duties under natural law. Vattel argued for several key rights: the right to liberty of conscience,[161] the right to the toleration of religious beliefs,[162] the right to property, and the right to commerce. He emphasized the right to commerce because he believed that without it, no one could procure the different things that may be necessary or useful to him.[163]

Another authoritative voice on natural rights was English jurist, justice, and politician Sir William Blackstone (1723–1780), who wrote the first comprehensive work on common law, the foundation of the legal system of the English-speaking world. In his work, he argued that the principal aim of society is to protect individuals'

154 Grotius, "*Commentary on the Law of Price and Bounty,*" (2006), Chapter II – Prolegomena, page 49.

155 Ibid., Chapter VII – justness of the case if the war were private, page 353.

156 Grotius, "*The Rights of War and Peace,*" (Liberty Fund, Indianapolis, from the Jean Barbeyrac edition, 2005), Book I, Chapter 1: What War is, and what Right is, page 138.

157 Pufendorf, "*On the Duty of Man and Citizen According to Natural Law,*" (1991): Chapter 6 - On the duty of every man to every man, and first of not harming others, page 57.

158 Ibid., Chapter 7 – On recognizing men's natural equality

159 Ibid., Chapter 13 – On the duties arising from ownership in itself, page 90.

160 Ibid., Chapter 3 – On natural law, page 35

161 Vattel, Emmerich de, "*The Law of Nations or the Principles of Natural Law in Four Books (1758),*" (Lonang Institute, 2005, Electronic Edition), Book I, § 128. Rights of individuals, page 78.

162 Ibid., Book I, § 135. Of toleration, page 81.

163 Vattel, Emmerich de, "*The Law of Nations - Or, Principles of the Law of Nature, Applied to the Conduct and Affairs of Nations and Sovereigns, with Three Early Essays on the Origin and Nature of Natural Law and on Luxury,*" (Liberty Fund, Indianapolis, 2008, Edited and with an Introduction by Béla Kapossy and Richard Whatmore), Book I, Chapter 8 - Of Commerce, page 132.

enjoyment of absolute rights, which are vested in them by the immutable laws of nature.[164]

Blackstone included several categories of absolute rights. Personal security involves uninterrupted enjoyment by a man of his life, his limbs, his body, his health, and his reputation. Personal liberty involves freedom of movement and protection from arbitrary imprisonment. Property rights include the free use, enjoyment, and disposal of all a man's acquisitions, without any control or diminution.[165] Blackstone asserted that any limitations to these rights could only be imposed by a jury of one's peers or by the law of the land.[166]

Natural Rights in Modern Law

From all this emerged the idea that natural rights were mainly limited in three ways. First, through the command of natural law to do not unto others what you would not want done to yourself. Second, the duty to recognize and protect equal rights in others. Third, the limitations placed upon us by society that transform our natural rights into natural liberty under the law. When we talk about natural rights, it is worth emphasizing that these were not merely theoretical ideas; they had direct influence on policy and legislation. Philosophers maintained close relationships with rulers, who often employed them and kept their books in their studies. As a result, these ideas were incorporated into various pieces of modern legislation.

The first example comes from 1689, when the Dutch king, William of Orange, invaded England with the support of influential British political and religious leaders and a Protestant majority population. He was invited to take the throne, replacing the Catholic rulers. However, before William and his wife could begin their joint rule, Parliament enacted a bill of rights and asserted that the rights and liberties claimed within it were the true, ancient, and indisputable rights of the people of the kingdom. The Prince and Princess of Orange issued a declaration confirming these "undoubted rights and liberties" of English citizens.[167]

The second example of natural rights influencing modern legislation is, of course, the United States. We need look no further than Thomas Jefferson's words in the Declaration of Independence, which echo not only the ideas of natural rights but also their aims:

164 Blackstone (1765), Book 1: Rights Of Persons, Chapter 1, Of the Absolute Rights of Individuals, page 76.

165 Ibid., Book 1: Rights Of Persons, Chapter 1, Of the Absolute Rights of Individuals [Author: summarized the absolute rights from this chapter into one paragraph].

166 Ibid., page 81.

167 Ibid., Book 1: Rights Of Persons, Chapter 1, Of the Absolute Rights of Individuals, page 78

> *"We hold these truths to be self-evident, that **all men are created equal**, that they are **endowed by their Creator** with certain **unalienable Rights**, that among these are Life, Liberty and the pursuit of Happiness."*[168]

After this declaration came a constitution and a 'Bill of Rights' codifying specific natural rights on which the government could not infringe. The foundation of the U.S. is particularly interesting, as it was a 'new' country integrating these philosophical concepts into practice. They frantically debated and voted on the proper limitations on government, taking control of their own future in the process. They did not consider unalienable natural rights a vague ideal but codified them and placed them at the center of the legal system. James Madison (1751–1836), the driving force behind the U.S. Constitution, never wanted the U.S. to be a pure democracy. He painstakingly built in various safeguards to protect minorities from the fickle interests of the majority and to prevent the government itself from succumbing to setting up an interest adverse to that of the whole society.[169]

The American Declaration of Independence, the Constitution of Virginia of 1776, and the French Declaration of the Rights of Man and the Citizen were the first constitutional instruments of modern times to proclaim that the natural rights of man must, as such, form part of the fundamental law of the state and that their protection was the reason of its existence.[170] Constitutional guarantees of basic rights have since become nearly universal, even in communist countries such as North Korea.[171] Natural rights became a global phenomenon with the Declaration of Human Rights, although, as will be explained in Section III, the concept of 'human rights' has evolved from its natural rights origins. Regardless, the recognition of the

168 Jefferson, Thomas, et al., "*The Declaration of Independence - The Unanimous Declaration of the thirteen United States of America,*" (Action of Second Continental Congress, July 4, 1776)

169 Feldman, Noah, "*The Three Lives of James Madison - Genius, Partisan, President,*" (Random House, New York, Epub, 2017), Book I, Chapter Three, Crisis: "*Given that there were multiple interests in society, there would be a constant pressure for those temporarily in the majority to violate the rights of those in the minority. If that was true, republicanism would inevitably produce injustice. Its premise—that majority rule was a good system that would preserve rights—was simply naïve.*" "*The government must also be 'sufficiently controlled itself, from setting up an interest adverse to that of the whole society.' A government that was neutral between different interests could easily become self-interested.*"

170 Lauterpacht (1950), Part I, Section II, 5.1 Introductory. The Doctrine of Natural Rights, page 74.

171 "*DPRK Constitution (2019),*" (The National Committee on North Korea, April 11, 2019), accessed on Aug 8, 2024, https://ncnk.org/resources/publications/dprk-constitution-2019.pdf/file_view: *"Article 67: Citizens are guaranteed freedom of speech, the press, assembly, demonstration and association. The State shall guarantee the conditions for the free activities of democratic political parties and social organizations."* [Author: this written law might not fully correspond with everyday life].

fundamental rights of man became a general principle of the constitutional law of civilized states.[172]

§ 2.5. Kant's Universal Rationalism

> *"When Plato speaks of humanity, he means the Hellenes in contrast to the barbarians. When Kant philosophizes, he maintains the validity of his theses for men of all times and places."*
>
> ~Oswald Spengler

The authors discussed so far equated natural law with a natural order ordained by God. Kant, while aiming to align rational thought with spiritual order, developed concepts that would eventually separate the two. Thus, Kant can be considered the last philosopher of the legal Enlightenment, and his ideas are crucial to understanding the development of our current legal system. Of ever-increasing importance to Kant's contemporaries—and to Kant himself—was the vision of human society and institutions that made the self-legislation of the free individual into the foundation of legitimate political order.[173] Kant believed in a single, universal human nature, to which appeal should be made when examining the legitimacy and authority of local arrangements. Hence, Kant thought, the appeal to universal humanity must take the form of a regulative, rather than a constitutive, idea. We should not seek to establish a single set of laws for all mankind; rather, we should judge each jurisdiction in terms of certain a priori constraints, conformity to which would be the sign of its legitimacy. Furthermore, since the source of all authority in human affairs is reason, and since reason is common to us all, we must recognize that the benefits and burdens of political order lie equally on everyone.[174]

For Kant, everything in nature works according to laws. He argued that only a rational being has a will, which is the ability to act according to the thought of laws—to act on principle. To derive actions from law you need reason, so that is what will is: practical reason.[175] When the thought of an objective principle constrains a will, it

172 Lauterpacht (1950), Part I, Section II, 5.6. Fundamental Rights in Modern Constitutions, page 89, [Author: the author paraphrases Article 38 (3) of the Statute of the League of Nations' Permanent Court of International justice].

173 Scruton, Roger, "*Kant – A Brief Insight,*" (Sterling Publishing Co. Inc., New York, 2010, Epub), Chapter Seven, Enlightenment and Law.

174 Ibid., Chapter Seven, Enlightenment and Law, Universalism.

175 Kant, Immanuel, "*Groundwork for the Metaphysic of Morals,*" (Jonathan Bennet, July 2005, Last amended: September 2008), page 18.

is called a *command* of reason, and its verbal expression is called an *imperative*. All imperatives are expressed with an 'ought,' which indicates how an objective law of reason relates to a will that it constrains. All imperatives command either hypothetically or categorically. If the action would be good only as a means to something else, the imperative is hypothetical, but if the action is thought of as good in itself and hence as necessary in a will that conforms to reason, which it has as its principle, the imperative is categorical.[176] An imperative would be categorical if it represented an action as being objectively necessary in itself without regard to any other end.[177] The natural law thus was nothing less than a judicial translation of the categorical imperative.

There is only one categorical imperative, and this is it: "act only on that maxim through which you can at the same time will that it should become a universal law."[178] So the universal imperative of duty can be expressed as follows: "act as though the maxim of your action were to become, through your will, a universal law of nature."[179] Kant argued that if human nature were the only basis for morality, mankind would be condemned to self-contempt and inner disgust. He maintained that man—and in general every rational being—exists as an end in himself and not merely as a means to be used by this or that will at its discretion. This leads to the practical imperative: "act in such a way as to treat humanity, whether in your own person or in that of anyone else, always as an end and never merely as a means."[180]

Kant came to represent the triumph of reason over nature, valuing each individual as a rational actor aligning with—and laying down—universal law. Each individual was to act as an end in himself, of equal value and will with all others. Kant's ideas promoted a radical universalism and the notion that ideals of the rational mind apply to all human beings equally. Where Locke and Rousseau had spoken of natural rights within the context of European society, Kant extended these concepts to all of humanity, regardless of culture or geography. But are these truly 'universal' principles?

§ 2.6. Natural Law Across Cultures

To explore the universality of natural law concepts, consider a hypothetical scenario: suppose we could teleport a group of individuals from various backgrounds to

176 Ibid., page 19.
177 Ibid., page 19.
178 Ibid., page 24.
179 Ibid., page 24.
180 Ibid., page 29.

different societies throughout history. Their assignment is to commit acts widely considered unethical, such as stealing livestock, kidnapping a woman and forcing her into marriage, murdering the local political leader, and appropriating a town hall or local church as a private residence. If morality were merely a fluid social construct, we might find societies that accept such behaviors. However, no society tolerates such actions. The widespread condemnation of such acts across diverse cultural contexts indicates a shared ethical foundation, supporting the concept of natural law. This phenomenon can be termed 'the moral constant.'

However, the Western interpretation of this natural order—the inalienable rights of the individual—is not a universally accepted principle. The Chinese, for example, came to another conclusion. Contemporary human rights scholar Jack Donnelly explained that Chinese Confucians understand 'the world'—nature, the cosmos, the universe—in terms of 'heaven-and-earth and the myriad things.' Heaven is understood both as a space above the earth and, much more importantly, as the source and rule of all reality. Heaven has a Dao—the Way, the Way of Heaven. The world operates according to the Way. Heaven is more a rule than a ruler; it is Dao (the Way) and Li (Principle), rather than God. Confucian thought is centrally concerned with understanding the natural principles, rules, and rites of well-ordered human communities.[181]

Donnelly explained that for the Chinese equilibrium, the Way is the great foundation of the world, and harmony its universal path. When equilibrium and harmony are realized to the highest degree, heaven and earth will attain their proper order and all things flourish.[182] While this echoes the Western ideals behind natural law, when the Chinese looked back to the depths of their ancient history for an idealized vision of the good society, it was a harmonious regime under the rule of a wise and virtuous king.[183] Thus, when Western society called for a virtuous population to align itself with natural law, Chinese natural law called for subjection to virtuous rulers aligned with the Way.

Donnelly continued that in Hindu tradition, Brahman, 'God'/nature/reality, is variously conceived: in pantheistic terms as encompassing all of reality; in personalistic, generally monotheistic, terms; and even in atheistic terms as something more like a natural principle of right order.[184] It is the concept of Dharma that regulates religious

181 Donnelly, Jack, "*Universal Human Rights in Theory and Practice, Third Edition,*" (Cornell University Press, Ithaca and London, 2013), Part III. Human Rights and Human Dignity, 9. Humanity, Dignity, and Politics in Confucian China, page 134, [Author: paragraph edited for readability].

182 Ibid., page 135, [Author: paragraph edited for readability].

183 Ibid., page 140.

184 Ibid., 10. Humans and Society in Hindu South Asia, page 148.

and moral dimensions of human life, combining the Thomistic categories of divine law and natural law into one. Dharma provides a comprehensive concept of social regulation in relation to patterns of ethics in the Hindu tradition. Dharma also links this ethical life with cosmic order, and it identifies the pursuit of 'duty' as a primary driver of human life.[185]

Hindu ethics and social theory, looked at somewhat more narrowly, revolve around the closely interrelated concepts of Dharma ('duty') and Karma ('divine justice') that generate samsara, the cycle of birth, death, and rebirth. This perspective also informs the understanding of various social positions in life. In the Hindu worldview, Donnelly explained, people are divided into various castes. These divisions are based on natural distinctions, not social conventions, a matter of the fabric of natural reality and being.[186] While Dharma may initially seem comparable to Western natural law, it leads to a fundamentally different outcome. Instead of promoting equal treatment of all human beings, it justifies an unequal division based on Karma from actions in current and previous lives.

Still, India, as a nation, has its origins in the call for (individual) liberty and equal rights. Mahatma Gandhi, considered the father of the nation, believed in the Divine equality of men and wanted equality for all in the eyes of the man-made law, irrespective of the type of their citizenship. He sought equal legal protection for all citizens, irrespective of caste, class, color, material possessions, numbers, race, religion, sex, or social status.[187] This message resonated strongly both within India and abroad.

Despite sharing similar Christian origins, in practice, natural law and natural rights do not enjoy the same prominence in the countries and peoples under the Orthodox Church. Stanley S. Harakas (1932–2020), a teacher of Orthodox theology, explained that the Church accepts and teaches the existence of a natural moral law inherent in human beings. This law encompasses the fundamental rules of human moral and social life. This law has its source in the will of God, who created humanity in His image and after His likeness, and may be discerned through experience and reason. God structured our conscience and made it so that our knowledge of good acts and those which are not so was self-learned.[188]

185 Ibid., page 149.

186 Ibid., 9. Humanity, Dignity, and Politics in Confucian China, page 150.

187 Theepa, Selvan, "*Gandhi's Approach to Human Rights,*" (Alagappa University, May 18, 2020), available at SSRN: https://ssrn.com/abstract=3604024

188 Harakas, Stanley. "*Eastern Orthodox Perspectives on Natural Law,*" (American Society of Christian Ethics, Selected Papers from the Annual Meeting, 1977), http://www.jstor.org/stable/23564839, page 42, [Author: partial quote from St. John Chrystostom].

However, the Orthodox patristic (early Christian church) view of natural law hardly received significant theoretical development. The strong legal tradition mediated through Augustine and Thomas of Aquinas and the canonists of the Christian West elicited a development never realized in the East.[189] The patristic understanding of the natural law sees it as an elemental moral law that articulates the absolutely necessary modes of behavior for the maintenance of the human community.[190] One might say it is a sort of common-denominator ethic. The Christian might observe that because the natural moral law, the written law of the Old Testament, and the evangelical ethic, all have this common core: there is no need for Christians to concern themselves with the natural law since they have a higher, more complete ethic in the Gospel.[191]

Human rights scholar Adamantia Pollis (1923–2015) highlighted various reasons why the Orthodox Church was no fertile soil for individual natural rights. Firstly, Eastern Orthodoxy does not emphasize the individualization of the person. Persons are interchangeable parts of the mystical unity of the religious community, the Ekklesia, a transcendent spiritual unity of all believers—a non-material, disembodied essence.[192] Secondly, Orthodoxy minimizes the importance of earthly life, viewing it primarily as a test of virtue and morality. This test leads to the attainment of Godliness, which in turn leads to redemption and heaven in the afterlife. If one can speak of 'rights' in such a theology, they consist of the right to exercise free will to avoid sin and hence achieve virtue and spirituality.[193] Thus, while Catholics and Protestants combine the spiritual nature of man with his distinctive personality, and while their concerns include the needs of the living, the Orthodox reject the person qua person and his or her rational faculties and recapitulate traditional, pre-Renaissance, pre-Enlightenment dogma.[194]

Islamic law has an even stronger focus on religious scripture. According to Anver M. Emon, a Canadian professor of law and history, Islamic jurists argue that all determinations of God's law must find expression, either directly or indirectly, from scripture. Extra-scriptural indices, whether in the form of rational proofs or references to nature, do not provide a proper basis or foundation for asserting the divine law.[195] There is discussion on new situations where no positivist legislation,

189 Ibid., page 42, [Author: partial quote from St. John Chrystostom].

190 Ibid., page 48.

191 Ibid., pages 49-50.

192 Pollis, Adamantia. "*Eastern Orthodoxy and Human Rights,*" (Human Rights Quarterly 15, no. 2, 1993), https://doi.org/10.2307/762542, page 343.

193 Ibid., page 341.

194 Ibid., page 344.

195 Emon, Anver M., "*Natural Law and Natural Rights in Islamic Law,*" (Journal of Law and Religion 20, no. 2, 2004), https://doi.org/10.2307/4144668, page 351.

scripture, or legal text necessarily provides insight, guidance, or precedent. To ascertain divine obligations where scripture was otherwise silent, some advocated for a naturalist thesis to ground their use of reason with objectivity and normative authority.[196] However, positivist jurists maintain that the Shari'a can address all situations. This is not to suggest that there is a determinate scriptural answer for every given legal issue but rather that the Shari'a in its totality provides guidance about the spirit of the law that a jurist can rely upon to decide a novel case.[197]

Rémi Brague, French professor emeritus of Arabic and religious philosophy, provided a more succinct conclusion. He argued that in Islamic law, due to the absence of separation between natural and divine law, there is no common ground between believers and unbelievers. There are no common rules for those who follow the scripture and those who do not.[198] This stands in opposition to the universal approach advocated by Kant and currently dominant in Western culture.

We can conclude that the idea of a natural order is universal across cultures. However, what this exactly means for the position of an individual in society is not. It is thus irrational to envision one way of life and one division of rights and duties and expect it to be universally accepted. Nevertheless, if one stole all the livestock from an Amazonian tribe, the locals would not go after him citing Cicero or natural rights jurisprudence. They would seek justice because they know the actions were wrong. What is wrong is not just determined by law but is ingrained in human nature itself. It is the ability to align ourselves with these universal truths that establish justice and peace within a society.

§ 2.7. As Non-Religious Concept

Christian scholars were unanimous in their conviction that natural laws were instilled by God. The legal philosophers during the Enlightenment were Christians, as were the American Founding Fathers, kings, and politicians of the era. It is therefore a logical conclusion to see natural law as a religious concept, and a Christian one at that. This association is significant because later critiques of natural law often take the form of critiques of religion. But natural law predates Christianity. Cicero's general concepts on natural law could have been written yesterday; his treatise

196 Ibid., page 354.

197 Ibid., page 352.

198 Brague, Rémi, "*On natural law in Islam,*" (Paris I/LMU München), https://www.academia.edu/12090804/Natural_Law_in_Islam?sm=b, page 10.

on religious rights and obligations is alien to the modern reader.[199] The religion changed, but the human core of the legal philosophy persisted.

Pufendorf observed no complete agreement among the learned. Even those seeking the fountainhead of natural law in God himself can be divided into those who believe natural law is imposed by God or divine will and those who believe natural law represents God himself.[200] The latter perspective is comparable to contemporary spiritual concepts such as 'laws of the Universe.'

Early Enlightenment Europe was turbulent, marked by religious persecution and the burning of suspected witches. The scholars discussed in this book walked a tightrope in what they were allowed to say, lest they be accused of heresy. Unsurprisingly, wise scholars observed the various religious factions and realized that they could not all be correct. They concluded that, despite their own beliefs, reason might be a better approach to discovering the tenets of natural law compared to religious dogma. Thus, even for those believing God was the source of all law, law itself became a body of knowledge separate from religion. Natural law needed to be a binding moral concept acceptable to all religious sects and political factions.

According to contemporary law professor Stephen Neff, there are, broadly speaking, three different streams of thought to which the label 'natural law' could be, and has been, attached. The first of these regards natural law as being of divine origin; its content comprises commands issued by God to the human race at large. The second stream regards natural law as derived from our biological nature—instinct, basically—'hard-wired' into each member of the human race. The third stream of natural law may be termed the rationalist one. It regards natural law as being a hypothetico-deductive system, like a mathematical system, in which conclusions are arrived at logically by an objective process of reasoning from basic axioms or first principles.[201] Natural law, to the rationalists, is a law about social relations between people. It arises out of reason itself, independently of human will. However,

199 Cicero, "*Treatise on the Laws (51 BC),*" (London: Edmund Spettigue, translated from the original, with Dissertations and Notes in Two Volumes by Francis Barham, Esq., 1841-42): "*Let the priests duly render the public thank–offerings to heaven, with herbs and fruits, on the sacrificial days. Also, on the appointed holidays, let them offer up the cream of milk, and the sucklings; and lest the priests should commit any mistakes in these sacrifices, or the reason of these sacrifices, let them carefully observe the calendar, and the revolutions of the stars." "When the law commands us to render divine honours to deities that are consecrated, as having partaken of humanity, as Hercules and the rest of the demi–gods, it indicates, that while the souls of all men are immortal, those of saints and heroes are divine.*"

200 Pufendorf, "*Two Books of the Elements of Universal Jurisprudence,*" (2009), Book I, Definition XII, page 214-215.

201 Neff (2012), Introduction, page XXV, [Author: this is from the introduction, so the summary of the editor, and not Grotius himself].

they argue it is not a product of divine will either. The content of natural law is no more changeable by God than are the laws of mathematics.[202] After all, as Grotius famously pointed out, "the Will of God is revealed, not only through oracles and supernatural portents but above all in the very design of the Creator; for it is from this last source that the law of nature is derived."[203]

American philosopher of law Lon L. Fuller (1902–1978) plainly argued that natural laws have nothing to do with any "brooding omnipresence in the skies." They remain entirely terrestrial in origin and application. They are like the natural laws of carpentry, or at least those laws respected by a carpenter who wants the house he builds "to remain standing and serve the purpose of those who live in it."[204]

> *"It should be noted that different ways of knowing give us different sciences. The astronomer and the natural philosopher both conclude that the earth is round, but the astronomer does this through a mathematical middle that is abstracted from matter, whereas the natural philosopher considers a middle lodged in matter. Thus there is nothing to prevent another science from treating in the light of divine revelation what the philosophical disciplines treat as knowable in the light of human reason."*
>
> ~Thomas Aquinas

Natural Law = Decentralized

Regardless of its origins, natural law is the foundation of our legal systems. Moreover, having the individual human being as its subject, natural law is the most decentralized form of law. It is universal and equally applicable to each person and exists independent of the authority of individual and supranational governments. This offers a legal foundation for individuals cooperating across borders through decentralized technology.

Human nature and the natural world are far better understood now than they were even a century ago. The Internet allows us to easily observe and analyze human behavior and natural phenomena around the world. Consider Bitcoin: human interaction with this system aligns across cultures. Bitcoin and the wider crypto movement proved to be attractive to people around the world. It binds people on a deep level. This phenomenon demonstrates two fundamental desires: to control

202 Neff (2012), Introduction, page xxv-xxvi.

203 Grotius, "*Commentary on the Law of Price and Bounty,*" (2006), Chapter II, Prolegomena, page 20.

204 Fuller, Lon L., "*The Morality of Law - Revised edition,*" (Storrs Lectures on Jurisprudence, Yale University, 1969), page 96.

one's financial affairs and to connect and cooperate with others. No culture or religion can erase these desires. And no government has the authority to stand in the way of the peaceful and positive process of humans acting according to their nature. Such a system demands a legal foundation based on natural liberty—a foundation of natural law. Section III of this book introduces a set of basic rights and duties that approach this ideal as closely as possible.

§ 2.8. Summary and Interpretation

Key Takeaways:

- Natural law is a philosophy asserting that certain laws are inherent to human nature and can be understood through reason.
- Greek philosophers laid the foundation for natural law concepts, emphasizing universal moral principles and justice and virtue to align with them.
- Roman legal thought, particularly Cicero's work, developed the idea of a universal law applicable to all peoples.
- The Roman legal system codified many natural law concepts and influenced all Western legal traditions.
- Christian scholars such as Augustine and Aquinas integrated natural law into Christian legal theory, viewing it as a law imposed by God, discernible through reason.
- Christianity emphasized the value of individuals, opening the door to individual rights.
- Enlightenment thinkers secularized natural law concepts, developing theories of inalienable natural rights.
- Natural rights theories laid the foundations for all modern legal systems and inspired the American and French revolutions.
- Immanuel Kant considered that rational beings must be treated as ends in themselves, requiring all rational beings to preserve human dignity and free will.
- Chinese, Hindu, Islamic, and Orthodox Christian traditions conceptualize natural law differently, each offering different interpretations of individual rights and duties.
- While often associated with Christianity, natural law concepts transcend any single religious tradition and have many secular advocates.

- The persistence of natural law ideas throughout history suggests a universal human inclination toward certain moral principles—a moral constant.
- Natural law provides the ideal foundation for Decentralized Legal Systems, as it values everyone equally and exists independently of state or supranational authority.

Historically significant figures, including renowned legal scholars, statesmen, and liberty advocates, have consistently regarded natural law as the foundation of human existence and, consequently, of the legal system. This perspective is reflected in numerous constitutions and has persisted across diverse cultures and historical periods. Where does natural law come from? The theory of natural law maintains that certain moral laws transcend time, culture, and government. These are universal standards that apply to all of mankind throughout all of time. They are discoverable by reason and form the basis of a just society. Natural laws govern society as gravity governs the solar system. Without these invisible forces, planets would spin out of control, and society would descend into chaos. These laws remain as constant and predictable as the orbits of the planets, ensuring that acts like murder and theft have always been crimes and will remain so. Natural law served as a guiding light for humanity for the past 2,500 years. There is no reason to assume the next 2,500 years will be different.

Natural law is the most decentralized of the four sources of law, as it views each individual as an independent actor (ideal for decentralized networks). Unfortunately, these fundamental principles face multiple challenges both in modern philosophy and legal practice. The subsequent chapters examine how contemporary thought has diverged from natural law foundations, leading to an unbalanced legal system inverting these long-standing principles.

III

Civil Law – Law by Government

> *"The civil law is that which every nation has established for its own government."*
>
> ~*Institutes* of Justinian

As the Bitcoin revolution inspires modern generations to start anew with the financial system, so did the promise of unincorporated lands of the Americas entice mass migrations of peoples of all walks of life. While many early settlers were adventurers without families seeking excitement and riches, America provided a place where settlers could organize themselves, free from the suffocation of nobility and religious oppression in Europe. The settlers who established themselves on the shores of New England all belonged to the more independent classes of their native country. These men were intelligent and, without a single exception, had received a good education, and many of them were known in Europe for their talents and their acquirements. They brought with them the best elements of order and morality. They had not been obliged by necessity to leave their country; the social position they abandoned was one to be regretted, and their means of subsistence were certain. Nor did they cross the Atlantic to increase their wealth. The call which summoned them from the comforts of their homes was purely intellectual, and in facing the inevitable sufferings of exile, their object was the triumph of the idea, to seek some rude and unfrequented part of the world where they could live according to their own opinions. The emigrants who founded the state of Rhode Island in 1638, those who landed at New Haven in 1637, the first settlers in Connecticut in 1639, and the founders of Providence in 1640 began in like manner by drawing up a social contract, which was acceded to by all the interested parties.[205]

205 Tocqueville, Alexis de, "*Democracy in America - Volume 1 (of 2),*" (Project Gutenberg, 2006, eBook), Chapter II: Origin Of The Anglo-Americans—Part I. [author: this introduction is based on various sections from the book]

No sooner had the emigrants landed on the barren coast than it was their first care to constitute a society, for example by passing an act as follows:

> *"In the name of God. Amen. We, whose names are underwritten…Do by these presents solemnly and mutually, in the presence of God and one another, covenant and combine ourselves together into a civil body politick, for our better ordering and preservation, and furtherance of the ends aforesaid: and by virtue hereof do enact, constitute and frame such just and equal laws, ordinances, acts, constitutions, and officers, from time to time, as shall be thought most meet and convenient for the general good of the Colony: unto which we promise all due submission and obedience."*[206]

This history effectively illustrates the concept of civil law: a set of laws guiding a specific group of people organized in a state. In this case, it represents an early version of a legal framework for what would later become an American state, forged through a social contract. In this account, the settlers exemplified what Salmond identified as one of the goals of civil law: for justice to be transformed into law, and the law of justice into the spirit of law-abidingness.[207] Understanding these concepts is essential for comprehending how legal systems evolve and what role disrupting technologies may play in their development.

§ 3.1. Surviving the State of Nature

> *"So that laws, when prudently framed, are by no means subversive but rather introductive of liberty; for where there is no law, there is no freedom."*
> ~William Blackstone

We discovered in the previous chapter that our legal system is founded on natural law. However, a natural state based on natural law is insufficient; civil laws are necessary. Understanding this concept follows from imagining a state of nature where people live without any form of law. While anarchists might find this concept appealing, it presents several problems. First, without laws to protect life and property, nothing prevents the strongest and most unscrupulous from taking what

206 Ibid., Chapter II: Origin Of The Anglo-Americans—Part I.

207 Salmond (1913), § 9, page 22: *"So in the case of the civil law, only so far as justice is transformed into law, and the law of justice into the spirit of law-abidingness, will the influence of the judicature rise to an efficient level, and the purpose of civil government be adequately fulfilled."* [Author: edited for readability]

they want. Everyone would have a claim to everything, with no law preventing anyone from taking what they desire. Thomas Hobbes described this state of affairs as a war of every man against every man. In such a state, there would be no place for industry, because the fruit thereof is uncertain. There would be no place for culture, letters, arts, foreign trade, and extensive building. Life would be solitary, poor, nasty, brutish, and short.[208]

Despite the noble ideas underlying natural law, differences between individuals persist. Human history is one rife with dispute and conflict. To define and enforce justice, a sovereign power must be established, along with punishments for those who break the law. Hobbes argued that installing a civil law covenant that regulates these matters is a dictate of natural law itself.[209] Civil laws are the laws that men are bound to observe because they are members of a particular commonwealth.[210]

Locke explained the state of nature as "living without a decisive power to appeal to."[211] This state, despite being free, is full of fears and continual dangers. For this reason, men seek each other out to live in society for the mutual preservation of their lives, liberties, and estates.[212] There is a need for establishing a law to determine what is right and wrong and a common measure to settle all controversies.[213] Men unite into societies, so that they may have the united strength of the whole society to secure and defend their properties, and so that they may have standing rules to bound it, by which every one may know what is his.[214] As such, supreme command over society cannot take from any man part of his property without his own consent, for the preservation of property is the goal of government.[215]

The truth is that humans depend on one another for the satisfaction of their needs. Genevan philosopher Jean-Jacques Rousseau (1712–1778) observed that human society has evolved to a point where individuals can no longer supply their needs through their own unaided efforts but rather must depend on the cooperation of others. As such, men must engage in a social contract to regulate this mutual existence. How does this relate to freedom? He claimed that the formation of a

208 Hobbes, "*Leviathan,*" (2021), CHAPTER XIII. OF THE NATURAL CONDITION OF MANKIND, AS CONCERNING THEIR FELICITY, AND MISERY; The Incommodites Of Such A War.

209 Ibid., CHAPTER XXVI OF CIVIL LAWS; The Law Of Nature, And The Civil Law Contain Each Other.

210 Ibid., CHAPTER XXVI OF CIVIL LAWS.

211 Locke (1680), CHAPTER VII. Of political or civil society; § 89.

212 Ibid., CHAPTER IX. Of the ends of political society and government; § 123.

213 Ibid., CHAPTER IX. Of the ends of political society and government; § 124.

214 Ibid., CHAPTER XI. Of the extent of the legislative power; § 136.

215 Ibid., CHAPTER XI. Of the extent of the legislative power; § 138, [Author: the word 'end' was used here, which might be misinterpreted to suggest that 'property' constitutes the termination of government rather than a purpose or goal of government.].

legitimate state involves no net loss of freedom but that, in fact, it exchanges one type of freedom, natural liberty, for another type, civil liberty.[216] This civil liberty ensures that, now by law, a man still obeys only himself.[217]

Pufendorf concurred that in truth, few men have such goodness of character (or religious piety) that they willingly do what nature bids. For the maintenance of peace and society among men, it is necessary to establish laws through a pact of men and to execute these laws in a human court.[218] Natural law forbids transgression such as theft and homicide, but it is the province of civil laws to define what is another one's and what is one's own and what force may be employed against a man.[219] Regarding the creation of a state, he highlighted that by mutual cooperation and assistance, men may be safe from the losses and injuries which they often inflict upon each other.[220] The settling of disputes can then be done objectively and sentences pronounced and penalties executed in conformity with the laws.[221]

Blackstone explained that upon entering civil society, man gives up part of his natural liberty as a small price to purchase the advantages of mutual commerce and conformity before the laws. This species of legal obedience and conformity is infinitely more desirable than the wild and savage liberty which is sacrificed to obtain it. For when a man has the absolute and uncontrolled power of doing whatever he pleases, every other man would have the same power. As a result, there would be no security to individuals in any enjoyment of life. However, civil society can only so far restrain natural liberty as is necessary and expedient for the general advantage of the public. Any excess and causeless restraint of liberty, whether practiced by a monarch, a nobility, or a popular assembly, is a degree of tyranny.[222]

Vattel summarized that the goal of civil society is to procure for the citizens whatever they need, the accommodation of life, and, in general, whatever constitutes happiness. Additionally, it ensures the peaceful possession of property, a method of obtaining justice with security, and, finally, a mutual defense against all external

216	Rousseau, Jean-Jacques, "*The Social Contract,*" (Jonathan Bennett, December 2010), 8. The civil state, page 9
217	Ibid., 6. The social compact, page 6
218	Pufendorf, "*Two Books of the Elements of Universal Jurisprudence,*" (2009), Book I, Definition XIII, page 219.
219	Ibid., Book I, Definition XIII, page 206.
220	Pufendorf, "*On the Duty of Man and Citizen According to Natural Law,*" (1991), Book II; Chapter 7 – On the functions of the sovereign power, page 139
221	Ibid., Book II; Chapter 7 – On the functions of the sovereign power, page 140
222	Blackstone (1765), Book 1: Rights Of Persons, Chapter 1, Of the Absolute Rights of Individuals, page 77, [Author: paragraph edited for readability].

violence.[223] These reciprocal engagements between man cannot otherwise be fulfilled than by the entire nation to maintain the political association and ensure both its self-preservation[224] and the preservation of the individual members.[225] This obligation comes from the agreement by which civil society is formed: the social compact.[226]

§ 3.2. Forging the Social Contract

> *"And covenants, without the sword,*
> *are but words and of no strength*
> *to secure a man at all."*
> ~Thomas Hobbes

Individuals endowed with unalienable rights must engage in a social contract—no matter how rudimentary—to establish a society. A man living alone with his family has no protection against organized invaders who might seize both the family and the land. In short, the first order of business for civil society is the protection from force. The next step is establishing a system for the punishment of transgressions against natural law. Then there needs to be a system of property. If there is no collective agreement as to what constitutes property and how it can be transferred, all you have is possessions. Dispute resolution is another crucial element; a peaceful settlement system is vital for resolving contract defaults or rights and property violations. Following the need for rules on crime prevention, property, and dispute resolution, a question arises: how do we shape these rules? A basic political system becomes necessary.[227]

The idea of a social contract is not new. The concept of community as a partnership of equals dates back to Ancient Greece. Aristotle, for instance, viewed the state as a political partnership to attain some good.[228] As discussed, the Roman Republic was formed under similar principles. Even during the Middle Ages, the king and his subjects were bound together in an objective legal order. Both had duties toward

223 Vattel (Lonang Institute, 2005), Chapter 2; § 15. What is the end of civil society.
224 Ibid., Chapter 2; § 16. A nation is under an obligation to preserve itself.
225 Ibid., Chapter 2; § 17. And to preserve its members.
226 Ibid., Chapter 2; § 16. A nation is under an obligation to preserve itself.
227 Author: this paragraph summarizes what I consider the main arguments of enlightenment scholars on the need for a social contract.
228 Aristotle, "*The Philosophy of Aristotle - With a New Afterword by Susanne Bobzien,*" (Penguin Group, First Signet Classics Printing, June 2003, Translation by: J.L. Creed and A.E. Wardman), Politics, Book I, page 429.

God and the law, which meant the king was bound by prevailing customs, and subjects were not obliged to follow an unjust king.[229] However, an innovation started with the writings of Grotius. He built on Aristotelian ideas of justice, reasoning that in a social contract, shares are allocated by comparative proportion.[230] This can be interpreted as establishing a society through a contract among equals. While society at one point was understood to be an unequal arrangement between subjects and rulers, the social contract binds equal citizens to establish a ruling system for the benefit of all. This is a crucial but often misunderstood nuance.

Hobbes further developed this concept. He was crucial in discussing both the limitations of the state of nature and the need for a social contract to establish a society (commonwealth), which he termed a Leviathan. In essence, he said, nobody can be given any rights; everybody has a right to everything.[231] However, a right can be given away or renounced.[232] This is done either in consideration of some right reciprocally transferred to himself or for something else he hopes to gain; the transferring of rights is a voluntary act.[233] The mutual transferring of rights is that which men call contract.[234] And a contract can be signed directly or by inference, such as the consequence of words, silence, actions, or the forbearing of action.[235]

Contracts require a power set over the parties with right and force sufficient to compel performance. According to Hobbes, bonds of words are too weak to bridle men's ambitions, avarice, anger, and other passions.[236] Plus, just as a sale of property comes with the use of the property, a transfer of rights comes with the ability to use them.[237] He emphasized that all participants in a social contract are equal because only equals can engage in a mutual exchange of rights.[238] And

229 Kern, Fritz, "*Kingship and Law in the Middle Ages,*" (Basil Blackwell, Oxford, translated with an Introduction by S.B. Chrimes, 1956), pages 78 (duty), 70 (custom), 86 (lawlessness).

230 Grotius, "*The Rights of War and Peace,*" (2005), Book I, Chapter 1: What War is, and what Right is, page 145. [Author: Grotius bases his ideas on his own interpretation of Aristotelian ideas of Attributive justice and Expletive justice, to conclude that a society is created by equals. An interesting observation in a period when Kings ruled. This is the first writer I found who wrote on the social contract in this way].

231 Hobbes, "Leviathan," (2021), CHAPTER XIV. Of the First and Second Natural Laws, and of Contract.

232 Ibid., CHAPTER XIV. Of the First and Second Natural Laws, and of Contract; Not All Rights Are Alienable.

233 Ibid., CHAPTER XIV; Renouncing (or) Transferring Right What;

234 Ibid., CHAPTER XIV; Contract What;

235 Ibid., CHAPTER XIV; Signs Of Contract By Inference.

236 Ibid., CHAPTER XIV; Covenants Of Mutual Trust, When Invalid.

237 Ibid., CHAPTER XIV; Right To The End, Containeth Right To The Means.

238 Ibid., CHAPTER XIV; The Ninth, Against Pride: "*If nature therefore have made men equal, that equality is to be acknowledged: or if nature have made men unequal, yet because men that think themselves equal will not enter into conditions of peace, but upon equal terms, such*

finally, not all rights can be traded away because certain basic rights are needed to survive.[239] Thus, there will always be a limitation to the rights transferred to the commonwealth.

We are, by nature, all free, equal, and independent. This was the conviction of Locke. No one can be put out of this estate, and subjected to the political power of another, without his own consent. The only way to be divested from natural liberty is by agreeing with others to join and unite in a community. This community provides comfortable, safe, and peaceable living in secure enjoyment of properties against any that are not of it.[240] Such a political society thus starts with the consent of those governed, the only way to begin lawful government.[241] Thus, those consenting to make one body politic under one government put themselves under an obligation to be subject to the will of the society.[242]

Locke observed that consent to a social contract does not have to be express permission; this would be impracticable. There is, as well, the concept of tacit consent,[243] inferred from the choices through which the individual decides to live and to stall his property and possessions.[244] If one does not like the social contract, he is at liberty to move to any other commonwealth.[245] After all, the idea behind a commonwealth is for the individual to give up natural rights with an intention to better himself, his liberty, and his property. The power of society, or legislation constituted by it, can never be supposed to extend farther than the common good.[246]

Rousseau further developed and popularized the term 'social contract,' using it as the title of his book. He keenly observed that a state of nature could not go on since it would overpower each individual's resources for maintaining himself. In defending and protecting each associate's person and goods, each individual must unite himself with all in a way in which he still obeys only himself and remains as free as before.[247] This involves a two-way commitment between the public and the individual belonging to it: commit to the sovereign, and as a member of the

	equality must be admitted. And therefore for the ninth law of nature, I put this: that every man acknowledge another for his equal by nature. The breach of this precept is pride."
239	Ibid., CHAPTER XIV; The Tenth Against Arrogance.
240	Locke (1680), CHAPTER VIII. Of the beginning of political societies, § 95.
241	Ibid., CHAPTER VIII, § 99
242	Ibid., CHAPTER VIII, § 97
243	Ibid., CHAPTER VIII, § 119
244	Ibid., CHAPTER VIII, § 120
245	Ibid., CHAPTER VIII, § 121
246	Ibid., CHAPTER VIII, § 131
247	Rousseau, *"The Social Contract,"* (2010), 6. The social compact, page 6.

sovereign, he [the sovereign] has a commitment to each of the individuals, he being one of them.[248]

According to Rousseau, the transfer of a state of nature to a civil state produces a change in man: he goes from being driven by instinct to a sense of justice. His actions now have a moral aspect to them. Instead of only considering himself, he is forced to act on different principles and to consult his reason before acting on his inclinations.[249] He moves from natural liberty to civil liberty, and mere possessions become property protected by law.[250] Men who are unequal in strength or intelligence become equal by agreement and legal right.[251] He emphasized that equality before the law, with the same rights for all, is the only possible conclusion from a social contract.[252] It is precisely because of the forces at work in the world that tend to destroy equality that the force of legislation should always tend to maintain it.[253] In this line of thinking, a system that divides society into arbitrary groups, picks winners over losers, and assigns unequal legal benefits cannot be the goal of a social contract. Such a system, regardless of its noble intentions, falls outside the sovereign's legitimate activities.

Rousseau further argued that because no one has a natural authority over his fellow, and force cannot create right, we are left with agreement as the sole basis for legitimate authority among men.[254] And because of mutual agreement, men are secured against all personal dependence and against being taken by anyone or anything else—he is forced to be free.[255] He added that when the people do not like the form of a certain administration, they can make another arrangement. There is in the state no fundamental law that cannot be revoked, even the social contract itself.[256]

Pufendorf observed that mankind, even though being mutually helpful, suffers from several vices and is endowed with a considerable capacity to do harm. In addition, many other passions are found in the human race, such as greed for unnecessary possessions, desire for glory and surpassing others, envy, rivalry, and intellectual strife. Many of the wars by which the human race is broken and bruised are waged

248 Ibid., 7. The sovereign, page 8.
249 Ibid., 8. The civil state, page 9.
250 Ibid., 8. The civil state, page 9.
251 Ibid., 9. Real estate, page 10.
252 Ibid., BOOK 2; 4. The limits of the sovereign power, page 16.
253 Ibid., BOOK 2; 11. Differences among systems of legislation, page 26.
254 Ibid., 4. Slavery, page 3.
255 Ibid., 7. The sovereign, page 9.
256 Ibid., BOOK 3; 18. How to protect the government from being taken over, pages 52 & 53.

for reasons unknown by other animals.[257] Natural law imposes duties on humanity to establish order in this chaos.

The social contract then forms a bridge between the hypothetical and absolute duties, in accordance with fixed rules.[258] Pufendorf argued that a social contract necessarily originates from two agreements and a decree. The initial contract is the established bond between a people. In addition, there should be a degree as to the specific form of state to be instituted.[259] And then a second agreement is needed for the creation of a moral *persona* equipped with distinctive rights and obligations. This entity should be capable of using collective strength to discipline, compel, and thus govern effectively.[260] Consequently, this moral persona can bind all members of society through contracts made by those entrusted with the management of the common interest.[261]

Vattel highlighted that society is established with the view of procuring, to those who are its members, the necessaries, conveniences, and even pleasures of life—essentially, everything necessary for happiness. It aims to enable each individual peaceably to enjoy his own property and to obtain justice with safety and certainty. It enables its members in defending themselves as a body against all (external) violence.[262] To manage such a society, a public authority must be established to regulate common affairs. The public must have obedience to the public authority, yet this authority essentially is derived from the body of the society. Every society has a right to choose that mode which suits it best.[263] Fundamental regulations are needed that determine the manner in which the public authority is to be executed to obtain those advantages that were the foundation of the society in the first place. This is what is known as a constitution.[264]

The aim of the constitution and laws of a state is to form the basis for public tranquility, the firmest support of political authority, and security for the liberty of

257 Pufendorf, *"On the Duty of Man and Citizen According to Natural Law,"* (1991), Book I; Chapter I, On natural law, page 34. [Author: various sections on the page combined into one paragraph].

258 Ibid., Book I; Chapter 9, On the duty of parties to agreements in general, page 68.

259 Ibid., Book II; Chapter 6, On the internal structure of states, page 136-137, sections 7, 8 & 9.

260 "*Pufendorf's Moral and Political Philosophy,*" (Stanford Encyclopedia of Philosophy, First published Fri Sep 3, 2010; substantive revision Wed Mar 31, 2021), accessed on Feb 7, 2024, https://plato.stanford.edu/entries/pufendorf-moral/

261 Pufendorf, *"Two Books of the Elements of Universal Jurisprudence,"* (2009), Book I, Definition XII, page 145-146 [Author: replaced the term "common property" with "common interest."

262 Vattel (Lonang Institute, 2005), Chapter 6; § 72. The object of society points out the duties of the sovereign.

263 Ibid., Chapter 3; § 26. Of public authority.

264 Ibid., Chapter 3; § 27. What is the constitution of a state.

the citizens. But this stability is a vain phantom, and the best laws are useless if they are not religiously observed, both by the people destined to obey *and* by those who govern.[265] Rulers have just as much authority as the public has thought proper to entrust them with.[266] Those in office ought to have their minds impressed with the great truth that authority is solely entrusted to them for the safety of the state and the happiness of all the people. They are not permitted to consider themselves as the principal object in the administration of affairs or to seek their own satisfaction or private advantage.[267] Power resides with the office, not the individual occupying this office (a concept often forgotten).

For Kant, the social contract is "a contract on which alone a civil and thus completely lawful constitution can be based, and a community established."[268] However, there is a crucial difference between Kant and his predecessors. The social contract is not, for Kant, a constitutive but a regulative principle. We should not suppose that there is an actual contract, whether explicit or implied, at the heart of legitimate social order. Societies can arise in another way but are always burdened by a historical legacy that cannot be undone without injustice or violence. We should consider the social contract, according to Kant, only as a limiting idea of reason. It serves as a test that any actual legal order must pass to be legitimate. It is a core requirement of political order that people should be able to relate to each other and the state as ends, and not as means only.[269]

To conclude, the social contract is an agreement among individuals to establish a government that protects and facilitates their rights; it is not a contract between citizens and their government. The government possesses no inherent liberties; it only has the rights conferred upon it by citizens through the social contract. A bill of rights is primarily a list of liberties not conferred to the government, which it therefore cannot infringe upon. It can be compared with a prenuptial agreement that leaves certain assets outside the marital union. A social covenant is an exchange of equal rights between individuals to form a society. It is not a contract between a government and its subjects to provide benefits or a transfer of rights from one group to another.

265 Ibid., Chapter 3; § 30. Of the support of the constitution and obedience to the laws.

266 Ibid., Chapter 3; § 45. The extent of his power.

267 Ibid., Chapter 3; § 39. It is solely established for the safety and advantage of society.

268 Scruton (2010), Chapter Seven, Enlightenment and Law; The Social Contract [Author: Scruton quotes: *On the Common Saying*, R. 79]

269 Ibid., Chapter Seven, Enlightenment and Law; The Social Contract [Author: edited for readability]

§ 3.3. Civil Government

> *"If the will of the people...were sufficient to establish justice, the only question would be how to win over the votes of the majority, in order that corruption and spoliation, and the falsification of wills, should become lawful."*
>
> ~Marcus Cicero

Now that individuals have agreed to organize themselves into a society, with a set of rules and standards, the focus shifts to who should govern. Unfortunately, those in power do not often meet philosophical ideals. Over the centuries, various forms of government have been established, ranging from monarchies and empires to republics and democracies. Aristotle's book *On Politics* still offers the clearest distinction among different forms of rule. In it, he distinguished three ways a state can be ruled: by one person, by a small group of persons, or by all persons combined. Each category has a positive and negative form, depending on whether the ruler(s) prioritize the general welfare or their own interests. A single ruler looking out for the people is a benevolent king; one ruling for his own interest is a tyrant. An aristocracy is a small group chosen on merit to serve the general well-being, while an oligarchy is a small group making laws for their own benefit.[270]

The term 'dictator' is regularly used in discussions on single-person leadership. A dictator, however, was a Roman statesman who in times of crisis was handed emergency executive powers, often to fight off a foe.[271] Contrary to a tyrant, the term dictator was therefore a neutral term when talking about a single ruler. Similarly, the term 'aristocracy' became synonymous with European hereditary nobility. However, birth alone cannot ensure the wisdom, virtue, and character required from an aristocrat in the Aristotelian sense.

The final category, rule by the people, has two forms: direct democracy, where all vote on decisions, and constitutional government, where elected representatives rule within a framework of laws protecting liberty. In a constitutional government, people's power is limited to electing representatives, while certain fundamental principles remain non-delegable and must be respected by those in power. Despite the almost religious devotion to the word democracy in the modern world, the idea of full and unbridled (direct) democracy has been looked at as potentially dangerous

270 Aristotle, "*Politics,*" (Global Grey eBooks, translated by Benjamin Jowett, 2019), [Author: provided my personal interpretation based on books III and IV, and various third party interpretations].

271 Boatwright et al. (2004), page 50.

by lawgivers and philosophers across time—almost without exception. Crowds can be fickle and easily worked into a frenzy. Cicero called it "mob rule" and considered it the worst kind of government.[272] History provides numerous examples of minorities suffering under the decisions of democratic majorities. Therefore, most modern constitutions are fashioned in such a way that it is difficult for a majority to directly impose their will on minorities.

Regarding the division of power, Kant, building on the Aristotelian model, argued that a state's use of power can be either republican or despotic. Republicanism is the political principle of the separation of the executive power from the legislative; despotism is that of the autonomous execution by the state of laws which it has itself decreed. Thus, in despotism, the public will is administered by the ruler as his own will. Of the three forms of the state, that of democracy is, properly speaking, necessarily despotism. The reason is that it establishes an executive power in which 'all' decide for or even against one who does not agree. To conform to the concept of law, however, government must have a representative form, and in this system only a republican mode of government is possible; without it, government is despotic and arbitrary, whatever the constitution may be.[273]

Aristotle's work derived its significance from his analysis of a wide variety of political systems across Greek city-states. Hybrid forms of government existed, and transitions between different forms were frequent. He provided an honest perspective that in politics, special interest groups have always perverted public order. With this knowledge we can now dispassionately observe, in subsequent chapters, how former national representative democracies are slowly being transformed into a supranational despotic oligarchy. Explaining how this is done is one of the secondary goals of this book—to offer an alternative is the main one.

272 Cicero, "On Government," (1993), Chapter 4. On the State (III): The Ideal Form of Government: "*Well, I cannot see how the name of state can be regarded as any more applicable to a despotism exercised by the mob. For, to begin with, a people can only be said to exist at all when the individuals who comprise it are bound together in a partnership founded on law, according to your admirable definition, Scipio. But the sort of mass government to which you have referred is just as tyrannical as if a single person were the ruler, and indeed an even nastier despot, because there is nothing more disgusting than the sort of monstrosity which fictitiously assumes the name and guise of 'the people'. SPURIUS MUMMIUS: Yes, personally I prefer even monarchy to unmitigated democracy, which is the worst of all forms of government. But an aristocratic, oligarchic government is better than monarchy, because a king is a single individual, where a state will derive the most benefit if it comes under the rule of a number of good men, and not just one.*"

273 Kant, Immanuel, "*Perpetual Peace: A Philosophical Sketch,*" (1795), First Definitive Article for Perpetual Peace – The Civil Constitution of Every State Should Be Republican.

Separation of Powers

> *"Although we give the power to make laws to governments, these are bound by these laws as well. Ministers and public officers at all levels must exercise the powers conferred on them in good faith, fairly, for the purpose for which the powers are conferred, without exceeding the limits of such powers, and not unreasonably."*
>
> ~Thomas Henry Bingham

Polybius, a Greek/Roman historian, argued that the secret to the success of the early Roman Republic was the balance of power across the political system. It was a delicate relationship of checks and balances between appointed leaders, the Senate, and the people, ensuring that neither monarchy, aristocracy, nor democracy ever entirely prevailed. The consuls, for instance, held monarchical power during campaigns, but their authority was subject by popular election and limited by one-year terms, and they depended on the Senate for funding. The Senate engaged in foreign policy, but a vote of the people was required to ratify any treaty that might be made. Everything in the Roman system aimed at preserving liberty. Romans cared about liberty, not democracy.[274]

Greek philosophers also had a concept of separation of powers, though slightly different. Aristotle divided the administration of government into three parts: public affairs, responsible for treaties and alliances; magistrates, responsible for enacting or repealing laws; and judges, applying punishment.[275] *On the Laws* of Plato extensively analyzes the distinct virtues required from legislators and those involved in matters of state.[276]

John Locke observed that it may be too great a temptation for frail humans—prone to grasp for power—to be the same persons who have the power to make laws and to have also in their hands the power to execute them. There is too great a risk for them to forgo obedience to the laws and suit the law, both in its making and execution, to their private advantage. As such, the executive and legislative should

274 Beard (2015), Chapter Five · A Wider World; Polybius on the politics of Rome. [Author: entire paragraph summarized and edited for readability]

275 Grotius, "*The Rights of War and Peace,*" (2005), Book I, Chapter III: War as Publick and Private, pages 257-258.

276 Plato, "*on the Laws,*" (Internet Classics Archive, translated by Benjamin Jowett), Book III: "*...a statesman and legislator ought to ordain laws with a view to wisdom; [...] And to this I replied that there were four virtues [...]*" Book I: "*For wisdom is chief and leader of the divine class of goods, and next follows temperance; and from the union of these two with courage springs justice, and fourth in the scale of virtue is courage.*"

be separated.[277] Moreover, the executive can always be replaced by the people, who have the ultimate power to place it anew where they shall think best for their safety and security.[278] Locke further asserted that an executive placing the people under arbitrary misuse of power does not require obedience.[279]

Our current understanding of the separation of powers is generally attributed to French legal philosopher Baron De Montesquieu (1753–1794). His principles suggest that tyranny can only be prevented should no branch of government hold all powers. There would be an end of everything were the same man or the same body to exercise these three powers: that of enacting laws, that of executing the public resolutions, and that of trying the causes of individuals.[280] Thus, powers are typically divided into law-making, executive, and judiciary branches.

To prevent the abuse of power, governments are thus restricted in their ability to act unilaterally by the separation of powers. Other safeguards include democratic oversight, the limits of natural rights not conferred in the social contract, and, as we learn in Chapter 4, the laws and treaties to which the government itself commits. However, the key element underpinning the success of any system is whether the ruling body steps away from arbitrary rule and subordinates itself to the law as well. The final section of this book presents a framework that extends the separation of powers through the introduction of private, voluntary Decentralized Law.

§ 3.4. Legal Positivism Takeover

After the era of Enlightenment, the notion of natural law started to be challenged. Some argued that humans alone constructed laws, and only laws created and enforced by the government are laws properly so called. This idea became known as legal positivism. The term 'positivism' derives from the Latin *positum*, which refers to the law as it is laid down or posited (law is imposed). At the core of legal positivism is the view that the validity of any law can be traced to an objectively verifiable source (the 'ruler').[281]

277 Locke (1680), CHAPTER XII. Of the legislative, executive, and federative power of the commonwealth, § 143 - § 144, [Author summary].

278 Ibid., CHAPTER XIII. Of the subordination of the powers of the commonwealth, § 149.

279 Ibid., CHAPTER XIX. Of the dissolution of government, § 222: "*...whenever the legislators endeavour to take away and destroy the property of the people, or to reduce them to slavery under arbitrary power, they put themselves into a state of war with the people, who are thereupon absolved from any farther obedience...*"

280 Montesquieu, Charles Louis de Secondat, Baron de, "*Spirit of the Laws,*" (Batoche Books, Ontario, Canada, translated by Thomas Nugent, 2001), page 173-174.

281 Wacks, Raymond, "*The Philosophy of Law - A Very Short Introduction,*" (Oxford University

The U.S. Code sums up the difference between natural and positive law:

> *"Positive law is made by people. Natural law comes from sources that are universal. To many people (for example, to Thomas Jefferson in the Declaration of Independence) the source of natural law is God. Natural law is universal; it applies to everyone. Positive law only applies to those people who are the subjects or citizens of the government that creates the law. Positive law must be written down. Natural laws are unwritten laws. In short, then, positive law must be made by a given government and it relies on the government for its power."*[282]

While this definition helps us understand the difference between the two forms of law, it does not properly reveal the deep philosophical divide between the two ideas. Legal positivism would be a fork in the road that would change the ideas underpinning the legal system forever. While Vattel matter-of-factly declared the natural law–based legal order beyond discussion in 1758,[283] by the early 1800s, these foundations would have been largely dismantled.

Bentham's Attack

Jeremy Bentham (1748–1832) was an English philosopher, jurist, and social reformer. He is considered the founder of modern utilitarianism. From a legal perspective, his greatest influence came from his attack on the concept of natural law and, by extension, the legal order flowing from it. His attacks were so successful that modern legal scholars often trace the origins of the legal system to Bentham and discard everything that came before.[284]

He popularized under the term utilitarianism a revived version of the Platonian argument that nature has placed mankind under the governance of two sovereign masters: pain and pleasure.[285] Rejecting moral terminology, Bentham argued that

Press, 2006), page 18

282 "*THE TERM 'POSITIVE LAW'*," (United States Code, Office of the Law Revision Counsel), accessed on March 15, 2018, http://uscode.house.gov/codification/term_positive_law.htm

283 Vattel (Lonang Institute, 2005), Preliminaries, § 4. In what light nations or states are to be considered.

284 Hart, H.L.A., "*The Concept of Law, Second Edition,*" (Clarendon Press, Oxford, 1994), page 17: "*In criticizing it first and deferring to the later chapters of this book consideration of its main rival, we have consciously disregarded the historical order in which modern legal theory has developed; for the rival claim that law is best understood through its 'necessary' connection with morality is an older doctrine which Austin, like Bentham before him, took as a principal object of attack. Our excuse, if one is needed, for this unhistorical treatment, is that the errors of the simple imperative theory are a better pointer to the truth than those of its more complex rivals.*"

285 Bentham, Jeremy, "*An Introduction to the Principles of Morals and Legislation, 'A New Edition,*

the interest of the community is the sum of the interests of the individuals, aiming to increase the sum total of pleasures or to lessen the sum total of pains.[286] The business of the government, then, is to promote the happiness of the society by punishment and reward.[287] He rejected the idea of human rights on the ground that no rights exist before they have been established by a government. As such, he argued, the government is the source of rights and not any wishful thinking of what came before it.[288] Not natural rights, Bentham said, but the public good ought to be the object of the legislator, and general utility ought to be the foundation of his reasoning. To know the true good of the community is what constitutes the science of legislation—the art consists in finding the means to realize that good.[289]

Bentham observed that natural law theory provided a convenient platform for various individuals—professors, jurists, magistrates, and philosophers—to enforce their opinions with an air of superiority by claiming them as natural laws. They all dispute upon every point of their system, yet each one proceeds with the same confident intrepidity and utters his opinions as so many chapters of the law of nature.[290] He argued that the idea of natural law allows opinions to triumph without the trouble of comparing them to the opinions of others. These theories, often falling victim to superstition, charlatanism, and the spirit of sect and party, repose almost entirely upon blind sympathies and blind antipathies.[291]

According to Bentham, in practice, natural law has never had much direct influence upon the operations of government. On the contrary, every government has had for its system and its object the acquisition of strength and prosperity.[292] Moreover, there is no objective morality to base natural law on. Morality, in general, is the art of directing the actions of men in such a way as to produce the greatest possible sum of good. Legislation ought to have precisely the same object.[293] This fundamental principle of legal positivism—the pursuit of pleasure, the prevention of pain, and the analysis of policies according to those principles—is a far better basis for law

	1823'" (Jonathan Bennet, 2017), Chapter 1: The Principle of Utility, page 6.
286	Ibid., Chapter 1: The Principle of Utility, page 7, point 4 & 5.
287	Ibid., Chapter 7: Human Actions in General, page 43.
288	Bentham, Jeremy, "*Critique of the Doctrine of Inalienable, Natural Rights,"* (Jeremy Bentham, Anarchical Fallacies, vol. 2 of Bowring (ed.), 1843), Article II. *"...That there are no such things as natural rights -- no such things as rights anterior to the establishment of government..." "...a reason for wishing that a certain right were established, is not that right -- want is not supply -- hunger is not bread."*
289	Bentham, Jeremy, "*Theory of Legislation,"* (Trübner & Co., London, 1864, Translated from the French of Etienne Dumant, by R. Hildreth), Chapter I, The Principle of Utility, page 1.
290	Ibid., Chapter III; The Arbitrary Principle, or the Principle of Sympathy and Antipathy, page 7.
291	Ibid., Chapter III; The Arbitrary Principle, or the Principle of Sympathy and Antipathy, page 8.
292	Ibid., Chapter IV. Operation of these principles upon Legislation, page 13.
293	Ibid., Chapter XII. The Limits that separate Morals from Legislation, page 60.

than false reasons; antiquity is not a reason, the authority of religion is not a reason, the reproach of innovation is not a reason, and arbitrary definitions and metaphors are not reasons.[294]

Bentham criticized the natural law legal order by likening it to fiction. Take, for example, the social contract. Where has this universal convention been formed? What are its clauses? In what language is it written? Why has it always been unknown? Upon coming out of the forests, upon renouncing savage life, what tribe has possessed those great ideas of morals and politics upon which this primitive convention is built?[295] And what, Bentham wondered, about the natural law itself and the rights flowing from it? Do its advocates not see that these are laws of their own invention, that they are all at odds among themselves as of the contents of this pretended code, that they affirm without proof, that systems are as numerous as authors, and that, in reasoning in this manner, it is necessary to be always beginning anew, because everyone can advance what he pleases, touching laws which are only imaginary, and so keep on disputing forever?[296]

No, said Bentham. Only the government, and the laws coming from it, are real. Without a government, there can be no security, no domestic enjoyments, no property, no industry.[297] The legislator has to confer rights in line with achieving pleasure, avoiding pain, and balancing law with liberty. It is ultimately the legislator who balances the four subordinate ends of civil law: subsistence, abundance, equality, and security.[298] Bentham transformed the aim of law from discovering and protecting rights and duties to pursuing and legislating ends—a revolutionary break that upended millennia of legal understanding.

Criticism has continued beyond Bentham. Critics argue that natural law has never prevented a single murder, while it simultaneously has been invoked to justify outdated barbaric practices like slavery and discredited social systems such as feudalism. The modern materialist scientist might tell you that everything is man-made, including the ideas of natural law; they are merely personal preferences masquerading as eternal truths.[299]

294 Ibid., Chapter XII. The Limits that separate Morals from Legislation, page 67-69.

295 Ibid., Chapter XII. The Limits that separate Morals from Legislation, page 71: "6. A Fiction is not a Reason" [Author: main arguments highlighted]

296 Ibid., Chapter 10. An imaginary Law is not a Reason, page 82-83. [Author: edited for readability]

297 Ibid., Chapter XII. The Limits that separate Morals from Legislation, page 74.

298 Ibid., Part First, Objects of the Civil Law, Chapter II. Ends of Civil Law, page 96.

299 Author: I summarized the criticisms from various sources. One such example is: Rollins, L.A. "*The Myth of Natural Rights,*" (Loompanics Unlimited, Port Townsend, WA, 1983), which provides an overview of various criticisms of natural rights, most I found attacking a straw-man.

> *"Natural rights is simple nonsense: natural and imprescriptible rights, rhetorical nonsense, – nonsense upon stilts."*
>
> ~Jeremy Bentham

Legal Positivism's Reign

John Austin (1790–1859), a legal philosopher and Bentham's associate, founded the school of legal positivism, integrating this 'new,' more scientific, outlook into legal scholarship. He opined that law reflects commands between superiors and inferiors.[300] Austin first categorized 'proper' laws into positive laws and divine laws, both imposed by superiors on inferiors—the first by government, the second by God.[301] He added a category of 'improper' laws, which are not imposed by superiors on inferiors, including metaphorical or figurative laws. As examples, he cited human instinct, laws governing the natural world, natural morality, and human customs.[302] He rejected that laws of nature can result in innate practical principles and thought this idea should be expelled from the sciences of jurisprudence and morality, for it leads to misleading and pernicious jargon.[303] He stated that the opinions on human actions are framed in our own mind, and good or evil is nothing but pleasure or pain, or that which occasions or procures pleasure or pain to us.[304]

The study of law evolved into a scientific discipline. Around the turn of the twentieth century, the idea of law as a science was explored in various works on jurisprudence. Sir Thomas E. Holland declared law "a formal, or analytical science, as opposed to a material one."[305] It deals rather with the various relations which are regulated by legal rules than with the rules themselves which regulate those relations. Interestingly, Holland quoted the jus naturale, a universal code, from which all systems are derived, or to which they all tend, at least, to approximate—a

300 Austin, John, "*The Province of Jurisprudence Determined (*1832)," (Natural Law, Natural Rights, and American Constitutionalism, Taken from the fifth edition of Robert Campbell, published in 1885, PDF version): Page 2 "*...the aggregate of the rules, established by political superiors, is frequently styled positive law, or law existing by position.*" Page 3 "*Every law or rule ... is a command.*" Page 7 "*Laws and other commands are said to proceed from superiors, and to bind or oblige inferiors.*"

301 Austin, John, "*Province of Jurisprudence Determined, Second Edition – The First Part of a Series Of Lectures on Jurisprudence, or the philosophy of positive law,*" (John Murray, London, 1861), Author Preface, page XXXIX: "*The divine laws and positive laws are laws properly so called.*"

302 Austin (1832), page 20, The common and negative nature of laws metaphorical or figurative, shown by examples

303 Ibid., page 23

304 Ibid., page 17

305 Holland (1916), Chapter I – Jurisprudence, page 6.

set of rules, the contents of which is of universal application. Suppose that the laws of every country contain this common element; then a scholar might proceed to frame out of his accumulated materials a scheme of the purposes and methods common to every system of law. Such a scheme would be a formal science of actual, or positive, law.[306] We revisit this idea of deriving universal natural law from positive laws in Section III of this book.

English legal philosopher H.L.A. Hart (190n7–1992) was a major contributor to legal positivism in the twentieth century. However, he challenged the idea that law strictly exists because of commands, which he called "the simple notion of an order backed by threats."[307] He supported the theory that the source of a legal system is a sovereign, who receives habitual obedience but yields it to no one. Such a theory helps us do two things. First, it can help distinguish the law of a given society from many other rules, principles, or standards—moral or merely customary—by which the lives of its members are also governed. Second, within the area of law, we can determine whether we are confronted with an independent legal system or merely a subordinate part of a wider system.[308] However, the sovereign cannot be considered the only one commanding the law. There are other varieties of law, notably judiciary and legislative (public) powers or those that create or vary legal relations (private power) which cannot, without absurdity, be construed as orders backed by threats. Moreover, there are rules that did not come about by orders but through some other process. And finally, in modern society, it is not always possible to identify who the sovereign is, let alone what exactly is commanded.[309] In fact, there are forms of law created by individuals to empower themselves, such as contracts and wills.[310]

Hart accepted that there are primary rules of obligation but introduced secondary rules of "recognition, change, and adjudication" to complete the structure of a legal system.[311] Even the primary rules of obligation go further than mere commands and may include references to an authoritative text, legislative enactment, customary practice, general declarations of specified persons, or past judicial decisions.[312]

306 Ibid., Chapter I – Jurisprudence, page 7, page 13, [Author: combined two sections].

307 Hart (1994), page 16

308 Ibid., page 67

309 Hart (1994), Chapter V - Law as the Union of Primary and Secondary Rules, page 79.

310 Summers, Robert S., "*Professor H.L.A. Hart's Concept of Law,*" (Duke Law Journal, vol.1963, no.4), page 633: "*For Professor Hart, perhaps the most significant differences between legal rules and orders are these: (1) orders direct people to do or refrain from action, but many legal rules do not do this-instead they empower people to act in various ways, e.g., to legislate, to make wills and to make contracts;*"

311 Hart (1994), page 98.

312 Ibid., page 100.

Hart observed that there is a *hierarchy* in the recognition of the various laws which is not stated, but its existence is shown in the way in which particular rules are identified, either by courts, other officials, or private persons or their advisers. He used the English common law system as an example, where custom and precedent are subordinate to legislation since customary and common law rules may be deprived of their status as law by statute. Occasionally, courts in England may announce in general terms the relative place of one criterion of law in relation to another, as when they assert the supremacy of acts of Parliament over other sources or suggested sources of law.[313]

In the 1980s, American legal scholar Ronald Dworkin (1931–2013) came up with another critique of legal positivism. He argued that law is not only deducted from cold hard legislation, rather that it relies on judges to come up with the best constructive interpretation of the political structure and legal doctrine of their community.[314] A judge must decide not just who shall have what but who has behaved well, who has met the responsibilities of citizenship, and who by design or greed or insensitivity has ignored his own responsibilities to others. If this judgment is unfair, then the community has inflicted a moral injury on one of its members. The injury is gravest when an innocent person is convicted of a crime, but it is substantial enough when a plaintiff with a sound claim is turned away from court or a defendant leaves with an undeserved stigma.[315]

Dworkin also examined the broader influence of lawsuits on legal interpretation.[316] One question passionately debated is whether judges 'discover' or 'invent' law and what is desirable.[317] The plain-fact view, popular with laymen and academic writers, is that law is only a matter of what legal institutions, like legislatures, city councils, and courts, have decided in the past. Judges should always follow precedent in the law rather than try to improve upon it.[318] Contrarily, thoughtful lawyers and experienced judges say that judging is an art and not a science, that the good judge blends analogy, craft, political wisdom, and a sense of his role into an intuitive decision.[319]

Despite the shifting observations, positive law remains the core of modern legal philosophy. Influential Israeli legal philosopher Joseph Raz (1939–2022) listed several statements about law from positivist legal theorists he considered correct

313 Ibid., page 101.
314 Dworkin, Richard, "*Law's empire,*" (Harvard University Press, Massachusetts, 1986), page 255.
315 Ibid., pages 1-2, [Author: edited for readability].
316 Ibid., page 3.
317 Ibid., page 5.
318 Ibid., pages 7-8, [Author: edited for readability].
319 Ibid., page 10, [Author: edited for readability].

and important: first, satisfying as much of the whole body of human wants as we may with the least sacrifice; second, subjecting human conduct to the governance of rules; and third, [only] the norms of a legal order regulate human behavior.[320] What, then, he finally asked, is this law business about? The fact that our society is honeycombed with disputes—disputes actual and potential, disputes to be settled, and disputes to be prevented.[321]

Raz went on to list the functions of the law. He first listed the 'primary functions' of law: preventing undesirable behavior, securing desirable behavior, facilitating private arrangements, providing services, redistributing goods, and settling unregulated disputes. He further listed 'secondary functions,' being the determination of procedures for changing the law and the regulation of the operation of law-applying organs. Finally, he added the 'indirect social functions' of law, which he defined as the achievement of non-legal factors, especially the general attitude to the law and its interaction with social norms and institutions.[322]

We have come to a point where law has become a tool for regulating humanity—preventing 'undesirable' behavior, inducing 'desirable' behavior, and aiming for the redistribution of goods. The contemporary ideas behind law are far removed from the classical notions of liberty and the equal division of rights and duties. It is, in fact, the total opposite: it treats law and legal subjects as means to achieve ends.

> *"When law and morality contradict each other, the citizen has the cruel alternative of either losing his moral sense or losing his respect for the law."*
> ~Frédéric Bastiat

Positive Law vs Natural Law

> *"Hence it is that, to its critics, Natural Law theory has seemed to spring from deep and old confusions from which modern thought has triumphantly freed itself; while to its advocates, the critics appear merely to insist on surface trivialities, ignoring profounder truths."*
> ~H.L.A. Hart

320 Raz, Joseph, "*The Authority of Law, Essay on Law and Morality,*" (Oxford University Press, UK, 1979), pages 163-164, [Author: edited for readability].

321 Ibid., page 164, [Author: edited for readability].

322 Ibid., pages 169-172, 175-176.

The disparities between natural and positive law present us with various problems. The most obvious one is the shift from legal systems based on the idea of equality and liberty before the law to a world where those in power decide the sum of human wants and define good or bad behaviors. It reveals contrasting views: law as a means for people to organize their own lives according to their own free will or law as a tool to enforce an ideal organization upon them. Our traditional legal frameworks reflect the former, the modern ones the latter.

The second problem arises from removing morality from the legal system and assuming that what is legal is just. Those currently educated in law and working within the legal system mostly concern themselves with what the law is, not what it is supposed to be. Given that our politicians see law as a way to achieve their goals, there is no longer any moral deliberation from that end either. Almost nobody with the power to do something about it criticizes the avalanche of laws poured out over us daily. Self-proclaimed elites in high offices and academia believe they should regulate how others live—and little in contemporary legal philosophy challenges this viewpoint.

Leading utilitarians such as John Stuart Mill (1806–1873) were strong advocates of liberty.[323] One could make a strong case that it was their ideas that helped remove various unjust restrictions on life, including those on women and minorities, once considered 'natural.' Simultaneously, positivists undermined liberty in two steps: first, by assigning all law-making powers to the state—liberty's greatest potential enemy—to decide which behaviors align with the greatest good and, second, by depriving individuals of an objective legal standard against which to evaluate regulations—condemning them to always being figures in someone else's narrative.

Natural Law Defense

Salmond observed that with the rejection of natural law and natural rights, one rejects natural or moral duties as well. Such a person would have to argue that a debtor is under no moral duty to pay back a debt.[324] This person must be prepared to reject any natural right. He must align himself with the Greek Skeptics that the distinction between right and wrong, justice and injustice, is unknown in the inherent nature of things and is a matter of human institution merely. And if there are no rights save those which the state creates, it logically follows that nothing is right and nothing wrong save those which the state establishes and declares as

323 Mill, John Stuart, "*On Liberty,*" (Batoche Books, Kitchener, Ontario, Canada, 2001), [Author: Mill builds a strong argument for liberty, especially in terms of thought, speech and expression, and limits to State authority].

324 Salmond (1913), § 72, page 183

such.[325] The trains transporting prisoners through the Gulag Archipelago drove in compliance with local law, and likely on time. That their operations abided by state-imposed regulatory norms and were therefore just is clearly an absurd position.

Polish-British judge and legal scholar Hersch Lauterpacht (1897–1960) argued that many aspects of human nature are not products of fancy but objective factors in the realm of existence. Examples are the social nature of man, the generic traits of his physical and mental constitution, his sentiment of justice and moral obligation, his instinct for individual and collective self-preservation, his desire for happiness, his sense of human dignity, and his consciousness of man's station and purpose in life. It is indisputable that man's claim to recognition of inalienable rights is part of his moral constitution as a rational being endowed with conscience.[326] Historically, the doctrine of natural law is rooted deeply in the claims of freedom against the tyranny of the state and the injustice of its institutions.[327] Indeed, it has been a surprisingly constant measuring stick for arbitrariness in public policy. Set next to the myriads of interests, utopias, and fashions in the heads of legislators, natural law is an oasis of stability. Compared to societies founded on natural law's principles of liberty and equality, various political systems of the positivist era—fascism, communism, colonialism, and apartheid, to name a few—seem like whirlwinds of irrationality.

Friedrich Hayek (1899–1992), an Austrian-British economist, political philosopher, and Nobel Prize winner, believed that a community's laws must be measured by a higher standard: one that is 'found' and not simply created or willed. For legal positivists, he argued, law, by definition, consists exclusively of deliberate commands of a human will, and no higher standard exists by which to measure these commands. The implication is that there can be no limits to the legislator's will, and such rules as the state authority enacts must be accepted as legal. With legal positivism, there are no fundamental liberties that the legislator is bound to respect, and a despotic state can have the character of a legal order. The rule of law came to mean nothing more than the demand for legality, the requirement of a legal foundation for any act of the state. It thereby ceased to have any significance as a guarantee of individual freedom, since any oppression, however arbitrary or discriminatory, could be legalized by a law authorizing an authority to act in such a manner.[328]

325 Ibid., § 72, page 183

326 Lauterpacht (1950), Part I, Section II, Chapter 6, 4. The Alleged Arbitrariness of Natural Law, page 103

327 Ibid., Part I, Section II, Chapter 6, The Law of Nature as the Expression of Inalienable Rights of Man, 4. The Alleged Arbitrariness of Natural Law, page 112.

328 Miller, Eugene F., *"Hayek's The Constitution of Liberty - An Account of Its Argument,"* (The Institute of Economic Affairs, London, 2010), pages 108-109 [Author: paragraph edited for readability].

The argument that natural law means nothing if it is not committed to paper by those in power attacks a straw man. This is exactly what natural law theorists have argued all along. Pufendorf, for example, said that in addition to natural law, there is law imposed by the legislator.[329] He, however, made a distinction between civil laws, a creation of the state, and positive law, imposed (enacted) by legislators.[330] He further argued that in the civil laws in most commonwealths, the ideas of natural law have been included.[331] This is as it should be to ensure the preservation of the moral integrity of civil life.[332] Civil laws come to the aid of natural law in stipulating the obligations of natural law and clarifying whatever is obscure in it.[333]

Vattel added that natural law itself could only be sufficient if men were always equally just, equitable, and enlightened. But ignorance, the illusions of self-love, and the violence of the passions too often render these sacred laws ineffectual. All well-governed nations have thus resorted to enacting positive laws. There exists a necessity for general and formal regulations so that each may clearly know his own rights, without being misled by self-deception.[334]

In summary, natural law is not without sanctions. It places most of all moral boundaries around what legislators can and cannot get away with. Moreover, natural rights are incorporated into constitutions even in the most remote parts of the world. They feature prominently in most modern social justice movements and every revolution.

Taking a Wrong Turn

The legal scholars of the Enlightenment turned away from religious dogma, not from an established natural order. Bentham and his followers, however, removed all reference to any higher order and made the human mind and the 'mode du jour' the center of the legal world—which it remains to this day. The result is that since the nineteenth century, society has been uprooted by one thought experiment after another. Legal positivism leads different parties to view the legal system as a means to obtain their own ideal society: a tool to help them obtain pleasure or

329 Pufendorf, "*Two Books of the Elements of Universal Jurisprudence,*" (2009), Book I, Definition XIII, page 214.

330 Ibid., Book I, Definition XIII, page 217.

331 Ibid., Book I, Definition XIII, page 220.

332 Pufendorf, "*On the Duty of Man and Citizen According to Natural Law,*" (1991), Book II; Chapter 12, On civil laws in particular, page 155.

333 Ibid, Book II; Chapter 12, On civil laws in particular, page 156.

334 Vattel (Lonang Institute, 2005), Book I, Chapter 13, Of justice And Polity, § 159. To establish good laws, page 96.

alleviate pain. The result is an endless parade of special interest groups clawing at the legal system to get what they want.

One criticism of natural rights is that they do not exist. After all, even the most basic rights, such as free speech, face restrictions in law everywhere. But this confuses shallow freedom with responsible liberty. Natural rights are unalienable, not unlimited. As a result, property laws can be restricted by tax laws. At the same time, the tax code cannot abolish property rights. That an individual can own property, that is the inalienable right. Does this lead to practical issues? Of course. History is a never-ending debate about where rights begin and end. At the same time, only a fool or a tyrant would argue for a legal system where nobody has the right to speak, own property, have religious beliefs, or live. Defining natural law is as hard as quantifying the greatest good for the greatest number of people. Both ideas lead to endless discussion. How to compare your pleasure to my pain? What about delayed gratification? Rights are unavoidably in the way when maximum utility lies elsewhere.

Utilitarianism—and by extension legal positivism—treats human beings as means to an end and, moreover, as collectives. It confuses public policy with justice and relies on 'experts' to define the greatest good for all. They ignore complex human relations and subjective motivations. To deal with the chaos of the world, and the fickleness of the human condition, it flees into science. But legal systems are human systems without reproducible outcomes. There are serious limitations to expressing these complex systems in the numbers and models used in scientific analysis. Take the following example by Raz, arguing that the following formula determines when a possible act is neither prohibited nor permitted:

$$\vdash \Diamond ((\ \text{-LPr}\ x, \varphi) \ \&\ (\text{-LPer}\ x, \varphi)).$$[335]

The practical use of this formula for a judge or lawyer, let alone the average citizen: unclear.

There is another reason why science and law do not mix well: science is falsifiable. It is in a constant search for better data and in a competition between theories that best explain the factual world. It is a body of knowledge constantly being improved upon. Law, on the other hand, fixes ideas in time. Were science to dictate law, society would be uprooted every time a thesis is proven. Were law to dictate science, it would stop proper inquiry and enforce conformity, leading to dogmatic monstrosities masquerading as 'scientific consensus.' There is truth and benefit to the scientific method. Law should facilitate this process—not enslave it or be enslaved by it.

335 Raz (1979), page 58.

Moreover, as a fiat monetary system allows for endless money creation, positive law theory opens the door to endless law creation. And while a gold or Bitcoin standard places limits on financial engineering, natural law places restrictions on the areas of life that can be regulated. It is not surprising that those in power do not favor such limiting concepts. However, Bitcoin's mathematical monetary system introduces restrictions back on the financial system. Can Decentralized Law bring back limits to out-of-control law creation as well?

It must be said that the 'natural vs positive law' debate has fallen victim to the tendency of humanity to reduce ideas to dilemmas (arguments between opposites). Natural and positive law are simply distinct but related concepts—two sides of the same coin. Nothing in the positive law theory conclusively refutes the notion of natural law. Similarly, nothing in natural law texts even remotely argues that humanity can regulate itself without positive laws written by people with both their feet on the ground. When examining the history of ideas shaping both society in general and law in particular, one can see these ideas circling each other like a string of DNA. Natural law serves as the floor plan, while positive law represents the actual building. Natural law concerns what law ought to be, while positive law concerns itself with the reality of what the law is. Lawyers arguing in court should restrict themselves primarily to the positive law. Those designing a legal system for a novel technology should keep in mind the natural law principles that formed the basis for all respected legal systems.

While legal positivists have greatly contributed to legal theory, one wonders if we took a wrong turn by elevating legal positivism as the new dogma. This shall become abundantly clear in the chapter on international law.

> *"All that is really meaningful and significant in human life is nonlinear, invisible, and unmeasurable."*
>
> ~David R. Hawkins

§ 3.5. Common vs Civil Law

> *"In like manner, in the ordinary trials of right, twelve men of the common people are the judges and give sentence, not only of the fact, but of the right; and pronounce simply for the complainant or for the defendant; that is to say, are judges not only of the fact, but also of the right."*
>
> ~Thomas Hobbes

So far, this book has explained civil laws as the laws guiding a specific group of people organized in a state. It has further explained various legal philosophies. Beyond ideals and philosophy, there exists the practical reality of how legal systems originated and developed. Various countries base their legal systems on their traditional origins. Islamic nations exemplify this by using the teachings of the Quran as the basis of their legal system.[336] However, the most common legal system is called 'civil law,' which derives from the jus civile of Roman law, as discussed earlier. The civil law system expanded through mainland European influence, particularly through the Napoleonic Code, which nations worldwide adopted.[337] However, there is a different and unique origin story for a bottom-up type of law that originated in England and spread across the Commonwealth: common law.

Blackstone explained that in England there are unwritten or common laws that exist next to written or statute law. This unwritten law included general customs, particular customs of certain parts of the kingdom, and particular laws that are by custom observed only in certain courts and jurisdictions.[338] The prevalence of a custom-based legal system arose from low literacy levels. The legal authorities of the time, the druids, committed all their learning to memory. As such, laws were retained solely by memory and custom.[339] This ancient collection of unwritten maxims and customs have vigorously withstood the Norman conquest and what Blackstone called repeated attacks of Roman civil law. The latter refers to the conquest of Britain by Ancient Rome and the twelfth-century (Holy) Roman Empire, which established authority over most kingdoms of the (European) continent. He argued that while those states lost their political liberties, England's free constitution had instead been improved rather than debased.[340] In summary, these are the laws that gave rise and origin to that collection of maxims and customs which is now known by the name of the common law, a law common to all the realm, the jus commune or folk-right, in contradistinction to other laws, such as statute law and civil law.[341]

This unwritten or common law is properly distinguishable into three kinds. The first is that of **general customs**, universal rules of the whole kingdom. The authority of common law comes from its general acceptance and usage. The only method of proving that this or that maxim is a rule of the common law is by showing that it has

336 "*Sharia - Islamic Law,*" (Encyclopedia Britannica, Last Updated: Dec 3, 2024), accessed Dec 22, 2024, https://www.britannica.com/topic/sharia.

337 "*Napoleonic Code - France [1804],*" (Encyclopedia Britannica, last revision: May 29, 2015), accessed Dec 22, 2024, https://www.britannica.com/topic/Napoleonic-Code.

338 Blackstone (1765), Introduction, Section 3, Of the Laws of England, page 39.

339 Ibid., page 39.

340 Ibid., page 41.

341 Ibid., page 41, [Author: edited for readability].

always been the custom to observe it.[342] It is a mark of English liberty that common law depends upon custom, which carries this internal evidence of freedom along with it, that it probably was introduced by the voluntary consent of the people.[343]

The second branch of the unwritten laws of England is **particular customs**, or laws which affect only certain sectors or the inhabitants of particular districts. This is a particular system of customs used only among one set of the king's subjects. An example is found in the custom of merchants, or Lex Mercatoria. For the benefit of trade, this is allowed to have utmost validity in all commercial transactions. Traders in England made their own laws, for it is a maxim of law that "every man is to be credited in what concerns his own profession."[344]

The third branch is **particular courts and jurisdictions**, i.e., civil and canon laws. First, these laws did not bind the subjects of England. Popes and emperors had no authority there. However, some of these have been (voluntarily) admitted and received by immemorial usage and custom in some particular cases and some particular courts.[345] Next are the 'leges scriptae,' the written laws of the kingdom: statutes, acts, or edicts made by the king's majesty, by and with the advice and consent of the House of Lords and the House of Commons.[346]

Judges in Common Law

Blackstone explained that in the English common law system, judges in various courts of justice determine which customs and maxims are valid. As such, remembrance of past rulings is one of the chief qualifications of the judges. Precedent must be followed, as justice cannot be consistent if rulings depend on each judge's opinion. On the contrary, law being solemnly declared and determined becomes a permanent rule. Judges have sworn to determine the law according to the known laws and customs of the land and recognize that they cannot pronounce a new law but merely maintain and expound the old one.[347] As such, under common law, what the judge says is law, not what the emperor once determined.[348]

Blackstone continued that it is up to the judge to interpret the law and the will of the legislator. He has to interpret intentions when the law was made and look at the words, the context, the subject matter, the effects and consequences, or

342 Ibid., page 42.
343 Ibid., page 44.
344 Ibid., page 45.
345 Ibid., page 47.
346 Ibid., page 50.
347 Ibid., Introduction, Section 3, Of the Laws of England, page 42.
348 Ibid., Introduction, Section 3, Of the Laws of England, page 43.

the spirit and reason of the law.[349] From this method of interpreting laws, by the reason of them, arises what we call equity: the correction of that wherein the law is deficient.[350] There exists a balance between equity and law. Law cannot be too specific and rigorous and take away all equity. However, the liberty of judges in considering all cases in an equitable light must not be indulged too far, lest thereby all law is destroyed. According to Blackstone, law without equity is more desirable for the public good than equity without law.[351] The latter would make each judge a legislator and introduce infinite confusion. It would go against the concept of separation of powers discussed earlier as well.

Thomas Henry Bingham (1933–2010), a respected British judge who served as Master of the Rolls, Lord Chief Justice, and Senior Law Lord, added that judges naturally develop law, but not to create new criminal offenses or widen existing ones. The latter would go against the principle that no one can be convicted for a crime that does not yet exist.[352] Thus, existing law places constraints on what judges can rule on within a common law system.

Common Law vs Civil Law

Even in the time of Blackstone, the influence of the statutory law in England was already substantial. His analysis responded to the increasing challenges confronting common law systems. Those involved in academic education had moved to study civil law, as it was considered more rational. Moreover, the pope had banished the study of common law.[353] He argued that codifying the law would change the English legal system because "where the common law and a statute differ, the common law gives place to the statute, and an old statute gives place to a new one."[354] As Hart clarified, in the modern English system, customary and common law rules may be deprived of their status as law by statute.[355]

349 Ibid., Introduction, Section 2, Of the Nature of Laws in General, page 36.

350 Ibid., Introduction, Section 2, Of the Nature of Laws in General, page 37: [Author: he quotes Grotius] "*From this method of interpreting laws, by the reason of them, arises what we call equity; which is thus defined by Grotius, 'the correction of that, wherein the law (by reason of its universality) is deficient.'*"

351 Ibid., Introduction, Section 2, Of the Nature of Laws in General, page 37.

352 Bingham, Thomas Henry, "*The Rule of Law,*" (Penguin UK, Reprint edition, London, Amazon eBook, 2011), Part II, chapter 3: "*Judges naturally develop law, but not develop the law to create new criminal offenses or widen existing offenses (this goes against the principle that he cannot be convicted for a crime he did not commit)*"

353 Blackstone (1765), Introduction, Section 1, On the Study of the Law, page 13.

354 Ibid., Introduction, Section 3, Of the Laws of England, page 52.

355 Hart (1994), page 101.

It appears that, despite differences in procedures and origins, the overall practice in modern common and civil law jurisdictions is fairly similar; a representative body of government passes most of the laws and regulations that govern our lives. Many of the laws in common law jurisdictions such as the U.S. and the UK are made in Washington and London, respectively. As in civil law jurisdictions, judges adjudicate based on these laws and regulations, providing clarification on specific issues through their rulings. As Salmond already observed in 1912, nearly everywhere the old medley of civil, canon, customary, and enacted law had given place to codes constructed with more or less skill and success.[356] Holland added that the increasing complexity of human relations calls for an increasing complexity of legal structures, rendering a merely empirical knowledge of law impossible. The evil has been partially remedied by the formation of codes, in which legislators, imbued with legal principles, have grouped the legal chaos under genera and species.[357] Legislation tends with advancing civilization to become the nearly exclusive source of new law.[358]

The ideas of natural law and natural rights serve as a strong foundation under both legal systems, although perhaps the concept of liberty is better understood in the Anglo-Saxon world.[359] And as far as Blackstone was concerned, the Justinian legal order discussed earlier in this book is the only possible foundation for an international division of legal systems.[360] Practitioners from both systems followed the same philosophical ideas from the same international scholars. Despite their different origins, and the more central role of judges in common law systems, both systems now rely heavily on centralized law-making. The next section on international law makes this abundantly clear.

At the same time, a major lesson can be learned from the differences in the origin of common and civil law. Rome showed us that legal systems can be designed from the top-down and radically conservative in its core principles while at the same time limited by liberty and open to improvement through voting. The laws of England show a remarkably different development. There is no clear moment when a constitution was imposed, and over the years, adjustments were readily made according to the latest developments and integrated as they appeared. Most of the laws were accepted by the people, either directly or through their representatives. The notion that a group of equals developing their own laws organically resulted

356 Salmond (1913), § 53. Codification, page 136.
357 Holland (1916), Chapter I – Jurisprudence, page 1.
358 Ibid., Chapter V – The Sources of Law, page 76
359 Author: there is no translation specific for the word ‘liberty’ in the Dutch language other than ‘vrijheid’ (freedom).
360 Blackstone (1765), Introduction, Section 2, Of the Nature of Laws in General, page 28.

in one of the world's two most dominant legal systems proves that it can be done again. Perhaps with Decentralized Law?

§ 3.6. Summary and Interpretation

Civil law represents the laws that individuals are bound to observe as members of a particular commonwealth. Civil laws guide a specific society of people. They are applied by the government to provide order, protect rights and property, settle disputes, and facilitate cooperation among citizens. Civil law transforms natural law into enforceable rules tailored to the needs of a particular society.

Key Takeaways:

- A state of nature cannot protect liberty; civil laws are needed to protect life and property.
- A social contract establishes equal individual rights and duties under a government. The government only has rights conferred by citizens through this social contract.
- Certain unalienable rights are excluded from the social contract.
- The social contract is a limitation on freedom that increases liberty.
- To maintain civil laws, different forms of government exist, including monarchy/tyranny, aristocracy/oligarchy, and republic/democracy.
- Separation of powers (executive, legislative, judiciary) is now considered crucial to prevent the government from pursuing its own interests at the expense of the people.
- Natural law remained the foundation for civil law until the end of the eighteenth century.
- Bentham and Austin founded legal positivism, rejecting natural law and natural rights as a basis for legal systems.
- Legal positivism argues that only laws created and enforced by the government are valid.
- Legal positivism views law as a tool for government to achieve the greatest good rather than protecting and facilitating inherent natural rights and duties.
- Legal positivism removes the focus on morality from the legal system, allowing for potentially unjust laws.
- Legal positivism mandates that government pursues public policy, overly relying on scientific models and technocratic thinking.

- Legal positivism remains the leading legal philosophy today.
- The ‘civil law’ system originates from mainland Europe and relies on codified statutes drafted by legislators.
- The ‘common law’ system originated in Britain from unwritten customs and judicial precedents. It proves that a legal system with bottom-up laws is possible.
- Modern legal systems in both common law and civil law jurisdictions are increasingly similar, with most material laws made by central governments.

As of today, the idea that national governments impose laws is taken for granted. Natural law, despite being the origin of our legal system, is treated as ancient history. Most people do not consider alternatives, especially since they influence the process by electing lawmakers. However, the following sections on the final two sources of law reveal that law-making power is not exclusive to national governments at all...

IV

International Law – Law by Treaty and Hidden Force

In 1619, the Dutch government arrested Hugo Grotius for the crime of issuing a declaration of religious toleration during a time of religious wars and great intolerance. In addition, he supported the losing political faction. For these actions, he was sentenced to life in prison and confined in Castle Loevestein. Housed in a modest room, Grotius, given his standing as a 'man of letters,' was allowed to continue his work. Periodically, guards brought a large chest filled with books into his room to aid his studies. One day, before the chest was picked up, he hid the large, heavy books and crawled inside. The unsuspecting guards lifted the chest, placed it on a cart, and transported it out of the castle. Grotius thus exited the castle undetected. He fled to France, where he lived under the patronage of King Louis XIII. There, he wrote his most famous work, *On the Rights of War and Peace*, which formed the basis of modern international law.

Little did Grotius know that his framework would become a cornerstone for financial regulation in the twenty-first century. Today, international law stands as a primary source of cryptocurrency regulation, with organizations like the FATF and OECD crafting highly influential global standards. Despite its profound impact, few in the blockchain industry understand how these regulations emerge or why they prove difficult to reform once established. Understanding this invisible framework is crucial, as it shapes the future of blockchain technology.

This chapter examines the historical development and modern practice of international law, tracing its evolution from Grotius's theories to today's complex web of treaties, customs, and international organizations. It explores how international law transformed from a system governing relationships between sovereign states into a mechanism for directly regulating private individuals and organizations. It concludes by explaining how this system directly impacts blockchain technology.

§ 4.1. International Law Origins

> *"However, as it is impossible for the whole race of mankind to be united in one great society, they must necessarily divide into many; and form separate states, commonwealths and nations, entirely independent of each other, and yet liable to a mutual intercourse."*
>
> ~William Blackstone

The practice of various nations interacting with one another is as old as humanity itself. Throughout recorded history, nations conducted treaties of trade, war, and peace with their neighbors. Eventually, the Romans drew up a system of international legal relations. The earlier mentioned *Institutes* of Justinian divided legal systems into two categories. The first, called civil laws, consisted of statutes and customs specific to a people. The second, called the law of nations, comprised laws instilled by nature and applied to all nations. The law of nations developed as nations settled certain things for themselves as the occasion and the necessities of human life required. It differs from the pure law of nature in terms of equality and liberty, because sometimes wars arise, followed by captivity and slavery. The latter are contrary to the law of nature, for by the law of nature all men from the beginning were born free.[361]

This rudimentary law of nations would remain unstructured and poorly defined for almost one thousand years. However, this changed with the work of Grotius.

Grotius: Father of International Law

Grotius can be considered the founding theorist of international law. He crafted a coherent overview of law in general and international law in particular. This provided a legal framework for European nations as they interacted with each other—mostly through conflict—while shaping the world. Grotius began by categorizing the numerous practices of international law, which he claimed likely started with the immunity of ambassadors and the burial of the dead.[362] He applied the trusted argument that individuals cannot produce all they need to survive, and thus, all men should be privileged to trade freely with one another, and just as individuals have this right, nations have a right to freedom to trade as well.[363] Grotius argued

361 Justinian, "*The Institutes of Justinian,*" (2009): Title II. Of the Law of Nature, the Law of Nations, and the Civil Law. [Author: various quotes combined into one paragraph, and edited for readability].

362 Grotius, "*Commentary on the Law of Price and Bounty,*" (2006), Prolegomena, page 45.

363 Ibid., Chapter VII, Thesis IV, pages 354 & 356

that just as an individual has a right to self-defense under natural law, so does a nation.[364] He further explained that whatever all states have indicated to be their will is law in regard to all of them.[365] Additionally, he stated that neither the state nor any citizen thereof shall seek to enforce his own right against another state or its citizen, without judicial procedure.[366] He further divided the international law into institutions of agreement and accepted custom.[367]

One of his two most famous works is the aforementioned *On the Right of War and Peace*. European international politics at the time resembled Hobbes's concept of the state of nature: a war of all against all. Different factions strived for wealth and influence by force. Since war was such a common way for nations to interact, the first codes of conduct between nations centered on war and peace. A number of these codes, such as the signing of peace treaties, originated from ancient customs. Grotius drastically expanded the rules and regulations surrounding war. One of his contributions is a comprehensive definition of a 'just war.' According to Grotius, a just war could be waged for self-defense, the recovery of property or debt, or the punishment of an offense committed.[368] Moreover, Grotius argued that even if a war has been undertaken justly, it must also be fought justly. The third section of his book sets out rules of conduct for civilized nations during war, including the rights of taking spoils and prisoners, as well as obligations for moderation in killing and the treatment of captives.[369]

Looking at international law through its origins in war offers insight for understanding modern-day practice. Wars eventually end. On the battlefield, this is commonly initiated with one party waving the universal sign of surrender: a white flag. It is in both nations' interests to stop fighting when a surrender is offered and to ensure the immunity of the negotiators. If instead all messengers were killed, fighting could only continue until one of the parties was annihilated, leading to excessive loss of life on both sides. Additionally, peace agreements are only sensible if both parties are bound by them. This is why the highest-ranking officer, who alone can order all fighting to stop, must offer and accept surrender. These three key ideas—

364 Ibid., Chapter VII, page 370.

365 Ibid., Prolegomena, page 45, Rule VIII.

366 Ibid., Prolegomena, page 46, Law VII

367 Ibid., Prolegomena, page 45: "*Such institutions, indeed, are divided into two classes. For some have the force of an international pact, as in the cases just mentioned; others lack that force, and these I should prefer to classify under the head of accepted custom rather than under the head of law.*"

368 Grotius, "*The Rights of War and Peace,*" (2005), Book II, Chapter 1, justifiable Causes of War are, when for Defence; for the Recovery of one's Property, or one's Debt; or for the Punishment of an Offence committed."

369 Ibid., Book III, spoils (V), prisoners (VII), moderation in killing (XI), and treatment of captives (XIV).

mutually binding legal principles, immunity for diplomats, and the binding nature of international treaties on all a nation's subjects—form the core of understanding modern-day international law practice. As explained later, these concepts offer a back door into our national legal systems.

The second famous work of Grotius is *Mare Liberum* [The Free Seas], a chapter of a larger work called *On the Law of Prize and Booty*. The entire work is an essay that Grotius, a lawyer by trade, wrote in defense of a Dutch merchant. The backstory is that in 1494, the pope had settled a dispute between the Portuguese and Spanish Empires. He set up a line of demarcation from the North Pole to the South Pole, one hundred leagues (about 320 miles) west of the Cape Verde Islands. Spain was given exclusive rights to all newly discovered and undiscovered lands in the region west of the line. Portuguese expeditions were to keep to the east of the line. Neither power was to occupy any territory already in the hands of a Christian ruler.[370] In the following journeys of discovery, more land was discovered. Portugal claimed these lands as their own. Other European nations, such as the Dutch Republic, had their own claims on these lands (which inevitably led to confrontations).

In the early morning hours of February 25, 1603, Dutch captain Jacob van Heemskerck attacked the Portuguese merchantman *Santa Catarina* in the Strait of Singapore and obtained its peaceful surrender by nightfall. An unprovoked attack on a Portuguese vessel would have been highly questionable under international law. Grotius, who was asked to write a defense of the action, painted the actions as restitution of unjustly executed Dutch sailors.[371] The Portuguese had justified their actions by claiming to be masters not only of the land east of the demarcation line but also of the seas. Grotius argued against this claim, backed by the Spanish jurist Vazquez and the authoritative *Institutes* of Justinian. He contended that the oceans cannot be attached to the property of any one nation, because one is unable to permanently settle on the sea. No one possesses any right to the oceans other than that which relates to common use.[372]

Another Dutch jurist, Cornelis van Bynkershoek (1673–1743), later proposed limitations on this freedom. He argued that states could take control over the sea as

370 "*Treaty of Tordesillas - Spain-Portugal [1494],*" (Encyclopedia Britannica, Last Updated: Nov 28, 2024), accessed on Dec 12, 2024, https://www.britannica.com/event/Treaty-of-Tordesillas.

371 Grotius, "Commentary on the Law of Price and Bounty," (2006), Introduction.

372 Ibid., Chapter XII, page 323: "*It is, then, quite impossible for the sea to be made the private property of any individual; for nature does not merely permit, but rather commands, that the sea shall be held in common.*" page 333: "*....the sea, since it is as incapable of being seized as the air, cannot have been attached to the possessions of any particular nation.*" page 334: "*But no one is ignorant of the fact that a ship sailing over the sea no more leaves behind itself a legal right than it leaves a permanent track.*"

far as they could shoot their cannons from shore,[373] which at that time was argued to be a distance of three miles.[374] Since then, this limit has been extended to ten miles of territorial waters, and specific zones of economic interest have been included. However, the concept that the open sea belongs to no one, known as the 'freedom of the seas,' has since become a well-established rule. This principle has even been extended to space and Antarctica and serves as the contemporary framework for disputing claims in the South China Sea. This concept of freedom of the seas is one of Grotius's great contributions. Section III of this book includes an essay that explores how Grotius's arguments can be applied to modern decentralized networks. It argues that, like the open seas, the use of these networks should remain equally free and unencumbered by national and supranational claims of sovereignty. This concept shall be known as Freedom of the Nodes.

Transcending the Social Contract

Grotius and other scholars firmly believed that natural law forms the foundation of the legal system. As previously discussed, individuals enter a social contract to establish a commonwealth with binding legal force for its citizens. There is, however, one problem: the society and courts they established have no influence over other nations or their citizens. Citizens who are bound within a social contract still exist in a 'state of nature' with everybody outside of it.

We have learned about the problems associated with living in a state of nature for individuals, such as the lack of clear distinctions regarding property and the risk of violence in settling disputes. States face similar problems, as history unfortunately demonstrates. There was a need for a framework for independent nations to reconcile their differences. Contracts form, once again, the backbone of this framework.

German philosopher Christian Wolff (1679–1754) summarized that nations can be regarded as individual free persons living in a state of nature, with similar rights and duties imposed on them by their natural bond. He argued that this is why international law was originally known as the natural law of nations. However, Wolff argued that nations are not real but moral persons, with specific rights and duties assigned to them by the society entered into. As such, the laws of nations must differ from the laws for individuals. However, just as social contracts bind individuals, nations are

373 Bynkershoek, Cornelius van, "*De Domino Maris Dissertatio, (1744),*" (Carnegie Endowment for International Peace, Division of International Law, Washington, No date), page 44: "*Wherefore on the whole it seems a better rule that the control of the land [over the sea] extends as far as cannon will carry; for that is as far as we seem to have both command and possession.*"

374 Author: According to Brierly (2012), this account is likely a myth since cannons of that period could not shoot that far. Nevertheless, the metaphor endured.

bound by contracts as well. Natural law commands that these agreements should be observed.[375]

Vattel: Master of Statecraft

Vattel's book *The Law of Nations* marks a transition from philosophical discussions about how the law of nations ought to be to what we would now recognize as a textbook on the subject. He combined the then-prevailing knowledge and customs into a comprehensive guide and elucidated many of the concepts we currently take for granted. For him, too, natural law was the basis of the legal system. He called it a settled point that all men inherit from nature a perfect liberty and independence, of which they cannot be deprived without their own consent. He acknowledged that individuals make a partial surrender of their rights to the state. However, he maintained that as a society, they remain absolutely free and independent with respect to all other men and all other nations (as long as they have not voluntarily submitted to them).[376]

He went on to define nations as "bodies politic, societies of men united together for the purpose of promoting their mutual safety and advantage by the joint efforts of their combined strength."[377] The law of nations is then "the science which teaches the rights subsisting between nations or states, and the obligations correspondent to those rights."[378] Nations are then to be considered as "so many free persons living together in the state of nature."[379] What follows, from the law of nature, is that international law is immutable; nations can make no change in it, nor can they dispense with the obligations arising from it. Natural international law refers to a society established by nature between all mankind, which all must observe in order to live in a manner consonant to their nature.[380]

375 Wolff, Christian, "*The Law of Nations Treated According to the Scientific Method,*" (Liberty Fund, Indianapolis, Edited and with an Introduction by Thomas Ahnert, 2017), page 8.

376 Vattel (Lonang Institute, 2005), Preliminaries, § 4. In what light nations or states are to be considered: "*It is a settled point with writers on the natural law, that all men inherit from nature a perfect liberty and independence, of which they cannot be deprived without their own consent. In a State, the individual citizens do not enjoy them fully and absolutely, because they have made a partial surrender of them to the sovereign. But the body of the nation, the State, remains absolutely free and independent with respect to all other men, and all other Nations, as long as it has not voluntarily submitted to them.*"

377 Ibid., Preliminaries, § 1. What is meant by a nation or state.

378 Ibid., Preliminaries, § 3. Definition of the law of nations.

379 Ibid., Preliminaries, § 4. In what light nations or states are to be considered.

380 Ibid., Preliminaries: § 8. It is immutable. § 9. Nations can make no change in it, nor dispense with the obligations arising from it. § 10. Society established by nature between all mankind.

As a consequence of individual liberty and independence, it exclusively belongs to each nation to form her own judgment of what her conscience prescribes to her—of what she can or cannot do—of what it is proper or improper for her to do.[381] And since men are naturally equal, nations composed of men are naturally equal as well. Power or weakness does not in this respect produce any difference; a small republic is no less a sovereign state than the most powerful kingdom.[382] As such, they must be considered as possessing equal rights. Individuals cannot deny other individuals their liberty, and a state cannot violate the liberty of another state without destroying the foundations of their natural society. Since they are bound to cultivate that society, it is presumed that all nations have consented to this principle.[383] After all, no country can claim sovereignty for themselves without admitting the sovereignty of the other—they derive it from the same source.[384] The form of government of the state does not matter.[385]

Vattel then addressed the several engagements into which nations may enter to expand on the laws of nations. These can be established through custom or by treaty. The latter, he noted, binds none but the contracting parties.[386] The customary law of nations contains "certain maxims and customs, consecrated by long use, and observed by nations in their mutual intercourse with each other as a kind of law."[387] This law is founded on tacit consent, or as Vattel put it, "on a tacit convention of the nations, that observe it towards each other."[388] And when a custom or usage is generally established, it becomes obligatory on all the nations who are considered as having given their consent to it.[389] He concluded that the positive law of nations is formed by three elements: customary law (based on tacit consent), voluntary law (based on presumed consent), and conventional law (based on express consent).[390]

Vattel listed the rights and duties of each state regarding commerce. These include the rights to trade and the obligation to facilitate, protect, and favor it. States have a duty to refrain from hindering trade with unnecessary burdens or restrictions. Each state has the right to make commercial treaties as she thinks proper.[391] He argued

381 Ibid., Preliminaries, § 16. Effect of that liberty.
382 Ibid., Preliminaries, § 18. Equality of nations.
383 Ibid., Preliminaries, § 21. Foundation of the "voluntary law" of nations.
384 Ibid., Book II, Chapter 3, § 36. Their equality.
385 Ibid., Book II, Chapter 3, § 38. The form of government is foreign to this question.
386 Ibid., Preliminaries, § 24. Conventional law of nations, or law of treaties.
387 Ibid., Preliminaries, § 25. Customary law of nations.
388 Ibid., Preliminaries, § 25. Customary law of nations.
389 Ibid., Preliminaries, § 26. General rule respecting that law.
390 Ibid., Preliminaries, § 27. Positive law of nations.
391 Ibid., Book II, Chapter 2: § 21. General obligation of nations to carry on mutual commerce. § 22. They should favor trade. § 23. Freedom of trade. § 24. Right of trading belonging to nations.

that the observance of justice is the basis of all society. This maxim, he contended, is even more necessary between nations than between individuals. This is due to the dreadful consequences of quarrels of powerful bodies and the difficulty in obtaining redress.[392] All nations have an obligation to cultivate and observe justice toward each other and a right to refuse submission to injustice. This is what Vattel called a 'perfect' right, which results in the right of defense, of doing herself justice, and of punishing injustice.[393]

§ 4.2. Modern-Day International Law

Having examined its origins, we now turn our attention to modern international law practice. Despite being largely unknown to the public, international law has emerged as perhaps the most influential source of law. This chapter is crucial for understanding the surge of legislation in recent decades and the increasing worldwide coordination of laws, particularly in the cryptocurrency and financial sectors. Additionally, it provides insight into the framework required to develop the infrastructure for Decentralized Law.

Definitions

By now, international law is the result of centuries of multinational cooperation between different states. International trade, economic cooperation, wars, subsequent peace treaties, and the establishment of multinational governing bodies have collectively shaped modern international law. International law can be defined as follows:

> *"The body of rules and principles that determine the rights and duties of states, primarily in respect of their dealings with other states and the citizens of other states, determine what is a state and within what geographical territory they exist."*[394]

We can consider international law from two perspectives. From a philosophical point of view, it sets forth the rules and principles which ought to be observed in interstate relations. From a scientific perspective, it describes the rules and principles which

§ 27. General rule concerning those treaties.

392 Ibid., Book II, Chapter 2, § 63. Necessity of the observance of justice in human society.

393 Ibid., Book II, Chapter 2: § 64. Obligation of all nations to cultivate and observe justice. § 65. Right of refusing to submit to injustice. § 66. This right is a perfect one.

394 Lowe, Vaughan, "*International Law (Clarendon Law Series),*" (Oxford University Press, 1th edition, November 17, 2007), Chapter 1.2, "*The Scope and Nature Of International Law.*"

are generally observed in interstate relations.[395] International law is typically divided into two branches: public international law, which governs interstate actions, and private international law, which addresses conflicts of jurisdiction regarding private rights (the 'conflict of laws').[396] The last topic will be explored in further chapters, as it applies to transactions on decentralized networks without clear governing laws.

No central authority exists to enforce international law. There is no constitution and no world government that creates it. Article 38 of the charter of the International Court of Justice in The Hague defines three main ways of creating international law:[397]

A) *International conventions, whether general or particular, establishing rules expressly recognized by the contested states.*

B) *International custom, as evidence of a general practice accepted as law.*

C) *The general principles of law recognized by civilized nations."*

The first method is straightforward: states sign treaties with one or multiple other states. This creates a body of law that governs their interactions. Next, there are international conventions that establish universal rules, such as the Geneva Convention on the Treatment of Prisoners of War.[398] Conventions have the validity of treaties. However, the second and third methods involve the words 'accepted' and 'recognized.' This implies that international law is accepted over time based on consensus. As a result, a practice that becomes customary or is recognized as a general principle of law gradually establishes itself as international law.

International Law by Treaty

An international treaty is an agreement, generally in writing, between two or more states. A treaty may establish, modify, or terminate obligations. These obligations must fall within the legal capacity of the negotiating states. A treaty governs the affairs between states. Unlike other forms of international agreement, a treaty is usually concerned with matters of high state importance or with matters involving several states.[399]

395 Wilson, George G., Tucker, George F., *"International Law (1901)"* (Project Gutenberg, Ebook, January 2, 2013), Chapter I, Definitions.

396 Wilson & Tucker (2013), Chapter I, Definitions.

397 *"Statute Of The International Court Of justice, Art 38(1)"* (Charter of the United Nations, Treaty Serial No 993, 1945), http://legal.un.org/a'vl/pdf/ha/sicj/icj_statute_e.pdf

398 United Nations, *"III GENEVA CONVENTION RELATIVE TO THE TREATMENT OF PRISONERS OF WAR OF 12 AUGUST 1949,"* (Geneva, August 12, 1949), https://www.un.org/en/genocideprevention/documents/atrocity-crimes/Doc.32_GC-III-EN.pdf

399 Wilson & Tucker (2013), § 81. Definition [Author: paragraph edited for readability]

The validity of a treaty is generally recognized when the treaty parties have international capacity to act (they must be independent states) and the agents acting on behalf of the state are duly authorized. There must be freedom of consent, although this can be forced, for example, through war, reprisals, or otherwise. However, consent after personal violence against individual agents, or obtained by fraud, is not valid. Finally, treaties must be in line with the existing generally recognized principles of international law and the established usage of states.[400] For example, two states cannot negotiate a treaty concerning the borders of a third state without its involvement.

Vattel explained that treaties are obligations that produce rights and duties for the states involved. Consequently, the breaking of a treaty is an injustice. States already bound by treaties cannot engage in contradicting treaties. Furthermore, treaties cannot be incompatible with what a nation owes to herself or with what the sovereign owes to its nation.[401] The way this can be interpreted is that the treaty should not go against the self-interest of the contracting nations or breach its social contract.

Every treaty alters state sovereignty in subtle, and at times not-so-subtle, ways. It is a promise of one state toward others to act in a certain manner. Usually, these treaties need to be ratified by the states' legitimate government before becoming part of national law. However, once in place, they reduce the ability of local democratic processes to act with autonomy in areas governed by a treaty. This limitation is analogous to how property rights in a real estate object can be restricted by mortgages, insurance policies, bankruptcy proceedings, or multiple tenancies. Treaties thus do not diminish the rule of law but establish laws and procedures in parallel to the regular lawmaker—these laws are legitimate, just not democratic.

A state can withdraw from treaties. Nevertheless, this is not a decision taken lightly in international diplomatic circles. If a state fails to honor its agreements with other countries, it risks being seen as unreliable, comparable to defaulting on debt obligations. Other states might hesitate to engage in further treaties or honor their side of the bargain. As will be shown later in this chapter, other states increasingly have tools to enforce adherence to treaties.

400 Ibid., § 84. Validity of Treaties [Author: paragraph edited for readability]

401 Vattel (Lonang Institute, 2005), Book II, Chapter 12: "§ 164. The violation of a treaty is an act of injustice." "§ 165. Treaties cannot be made contrary to those already existing." "§ 170. Collision of these treaties with the duties we owe to ourselves."

Customary International Law

Customary international law is defined as "the collection of international behavioral regularities that nations over time come to view as binding as a matter of law."[402] The American Law Institute explains that "customary international law results from a general and consistent practice of states followed by them from a sense of legal obligation."[403] According to Goldsmith and Posner, governments take care to comply with customary international law and incorporate its norms into domestic statutes. Nations debate whether customary international law has been violated, and such violations can serve as grounds for war or international claims. Legal commentators view it to be at the center of the study of international law.[404]

Nevertheless, customary international law remains a puzzle. It lacks a centralized lawmaker, a centralized executive enforcer, and a centralized, authoritative decision-maker.[405] There is little agreement about which types of national actions count as state practice. Policy statements, national legislation, and diplomatic correspondence are the least controversial sources. Treaties are often used as evidence but in an inconsistent and under-theorized way. The writings of jurists are a common but highly tendentious source. Even more controversially, United Nations General Assembly Resolutions and other non-binding statements and resolutions by multilateral bodies are often viewed as evidence. Moreover, those who study and use customary international law—courts, arbitrators, diplomats, politicians, scholars—invoke these sources selectively.[406]

According to Goldsmith and Posner, there are four reasons why countries comply with customary international law. The first is the coincidence of interest resulting from the private advantage that each state obtains from aligning their actions. The second is coercion, where a powerful state (or coalition of states) forces or threatens other states to engage in acts that they would not do in the absence of such force. The third is true cooperation, where states receive higher payoffs from long-term cooperation than from short-term gains. The fourth situation arises when states face and solve bilateral coordination problems. In these cases, if states coordinate on identical or symmetrical actions, they receive higher payoffs than if they do not coordinate.[407]

402 Goldsmith, Jack L., Posner, Eric A., "*A Theory of Customary International Law,*" (The University of Chicago Law Review, 1999), page 1116.

403 The American Law Institute, "*Restatement of the Law, Third, Foreign Relations Law of the United States,*" (The American Law Institute, 1987), Part 1 - International Law and Its Relation to United States Law: § 102, (2).

404 Goldsmith & Posner (1999), page 1113, [Author: paragraph edited for readability].

405 Ibid., page 1114.

406 Ibid., page 1117, [Author: paragraph edited for readability]

407 Ibid., pages 1114-1115.

International Organizations

In addition to these established sources of international law, there have been more recent developments. International organizations (IOs) play an increasingly large role in the regulation of human affairs. Notable IOs, such as the UN and the European Union (EU), now set many international legal standards and are even actively seeking supranational executive powers. The UN, for example, is currently in its 'Decade of Action,' guiding the world to its seventeen Sustainable Development Goals by 2030. This effort aims at changing "the institutions and regulatory frameworks of governments, cities, and local authorities."[408] The EU, in turn, is an expanding organization increasingly responsible for laws in its member states, not seldom through stretching the clauses of its founding treaty to obtain more executive power.[409]

In addition, some IOs focus on specific areas of cooperation, such as the Bank for International Settlements (BIS), the World Trade Organization (WTO), and the International Maritime Organization (IMO). These types of organizations now set standards on almost any topic imaginable. The next chapter will further explain this process in detail, providing examples of this in the cryptocurrency and financial markets and discussing its problematic aspects.

These kinds of international regulations are commonly known as 'soft laws.' The term soft law denotes agreements, principles, and declarations that are not legally binding. This contrasts with hard law, which refers generally to legal obligations that are legally binding for the parties involved and therefore can be legally enforced before a court.[410] For soft laws to become hard laws, states must formalize them

408 "*The Sustainable Development Agenda,*" (United Nations), accessed on February 14, 2024, https://www.un.org/sustainabledevelopment/development-agenda/: "*The UN Secretary-General called on all sectors of society to mobilize for a decade of action on three levels: **global action** to secure greater leadership, more resources and smarter solutions for the Sustainable Development Goals; **local action** embedding the needed transitions in the policies, budgets, institutions and regulatory frameworks of governments, cities and local authorities; and **people action**, including by youth, civil society, the media, the private sector, unions, academia and other stakeholders, to generate an unstoppable movement pushing for the required transformations,*" [Author: the latter means propaganda through media and NGOs, and funding pressure groups and public interest litigation].

409 EPRS, "*Unlocking the Potential of the EU Treaties – An article-by-article analysis of the scope of action,*" (European Parliamentary Research Service, May 2020): "*With a view to reappraising the legal framework of the EU, it aims at identifying those legal bases in the Treaties that remain either under-used (in terms of the purposes they could be used to achieve) or completely unused. It analyses possible ways of delivering on EU policies, including in the development of common rules, providing enhanced executive capacity, better implementation of existing measures, targeted financing and increased efficiency.*"

410 "*Definition: Hard law/soft law,*" (European Center for Constitutional and Human Rights),

in domestic laws or international treaties. In practice, most of the international soft law regulation is put into action without opposition or delay. Sometimes, local law simply defers to international law standards.[411] Moreover, private institutions and branch organizations operating globally often uniformly apply these standards even in the absence of local law (especially financial institutions operating across multiple jurisdictions). Finally, international standards often are cited in courts as an authoritative source of law.

International law professor José E. Alvarez observed that over three hundred IOs engage in global forms of law-making. And all states find themselves being governed now, increasingly, by these institutions.[412] IOs now produce (new) obligations that are harder to fit into the traditional categories of sources of international law.[413] Moreover, modern international law is no longer equal; IOs have brought us hierarchies of value.[414] IO practices matter, and their actions have normative consequences beyond those powers that are explicitly delegated to them.[415] IOs have likewise aided and abetted another legally relevant actor: the non-governmental organization (NGO). The two have a symbiotic relationship. IOs have enhanced the normative impact of NGOs by granting them various privileges. These include observer or consultative status, access to documents, and, occasionally, other forms of institutional voice. For example, NGOs may distribute legal texts during treaty negotiations or file amicus briefs in institutionalized dispute settlement forums. IOs have empowered NGOs, and NGOs have increased the legitimacy of IOs.[416] All of these changes in sources, content, and legally relevant actors are changing the ways we comply with or enforce international law.[417]

Alvarez identified several legitimacy problems emerging from these novel forms of governance. First, there is a vertical governance gap created by the lack of a legitimating connection between international and domestic law-making. There is what can be described as a 'democratic deficit.' For instance, no one producing law at this level is elected by any recognized polity. Furthermore, there is an absence of checks and balances, which tends to enhance the power of the executive branches

	accessed on Feb 19, 2024, https://www.ecchr.eu/en/glossary/hard-law-soft-law/
411	Author: a clear illustration of regulatory deferral can be seen in international tax laws, particularly transfer pricing regulations. When the Asian countries accepted the OECD standards, this regulatory uniformity enabled me and a business partner to establish a tax law firm serving clients across the region.
412	Alvarez, José E., "*Governing the World: International Organizations as Lawmakers,*" (Suffolk Transnational Law Review, Vol. 31:3, 2005), page 592.
413	Ibid., page 594.
414	Ibid., page 594.
415	Ibid., page 596.
416	Ibid., page 597.
417	Ibid., page 598.

at the expense of other branches of government. Moreover, IOs offer limited forms of discourse, restrict deliberative participation to certain groups, and operate without transparency. Additionally, IOs often trump basic rights, such as due process, such as when they place individuals on lists of alleged terrorists.[418]

A second, horizontal governance gap comes from IOs not respecting the sovereign equality of states. Many of these organizations are dominated by Northern or Western countries, with this dominance often built into their structures through weighted voting techniques, as seen in the United Nations Security Council and the International Monetary Fund (IMF).[419] The third problem is that IOs reflect ideological policy predispositions. The IMF and the World Bank have been criticized for reflecting Western ideology, particularly the 'Washington Consensus' model for development.[420] A practical example is the requirement placed on Argentina by the IMF to discourage the use of cryptocurrencies as a condition for restructuring a loan.[421] The fourth and final issue is the principal-agent gap: a disconnect between the principal's desires and the agent's actions. Any of a number of disastrous UN peacekeeping missions might be explained in these terms.[422]

If all of this is not enough, IOs have changed. Former secretary-general of the UN Kofi Annan explained that the resources available to multilateral organizations, including the UN, are declining relative to the magnitude of the tasks they face. Private investment capital exceeds by a factor of six the available official development assistance. To succeed in the new century, the UN had to secure its own resources by partnering with the private sector. Together with "nonstate actors," the UN engaged in a "quiet revolution" of "good governance."[423] Local and state politicians risk criminal charges for accepting funds to influence regulations, but the world's most prominent institutions are funded by private interests. So-called 'public-private partnerships' now shape highly invasive global public policy without oversight.

418 Ibid., pages 607-608, [Author: paragraph summarized from various arguments].

419 Ibid., page 609.

420 Ibid., page 609.

421 Bastardo, Javier, "*Crypto Usage Rises Across Argentine, Despite The Anti-Crypto IMF Deal,*" (Forbes, Digital Assets, Apr 26, 2023), accessed on Apr 28, 2024, https://www.forbes.com/sites/digital-assets/2023/04/26/crypto-usage-rises-across-argentina-despite-the-anti-crypto-imf-deal/

422 Alvarez (2005), page 610, [Author: what he referred to is sexual violence and human trafficking perpetrated by UN forces mandated to keep the peace].

423 Annan, Kofi, "*The Quiet Revolution,*" (Global Governance, vol. 4, no. 2, 1998, pp. 123–38.), JSTOR, http://www.jstor.org/stable/27800190, [Author: paragraph summarized from various quotes from the paper].

Settling International Disputes

Countries in dispute, whether over territory or commerce, have no court to turn to for settlement. There is no world court with jurisdiction over all states. As such, there is a need for other means of settling a dispute. According to Vattel, this can be done with amicable accommodation, or by one or both states compromising on the issue at hand. Another way is for a trusted third party or authority to mediate the dispute.[424]

When states cannot agree about their differences and are nevertheless desirous of settling their disputes, they sometimes submit the decision to arbitrators chosen by common agreement. Once the contending parties have entered into articles of arbitration, they are bound to abide by the rulings of the arbitrators.[425] The most authoritative arbitration court for the settling of international disputes is the Permanent Court of Arbitration, located in The Hague, the Netherlands.[426]

§ 4.3. International Law's Growing Influence

Despite its opaque origins, international law is highly influential. British international law expert Vaughan Lowe wrote,

> *"International Law has no legislature. Nor is there a police force, or even a compulsory system of court before which States can be compelled to appear. Nevertheless, most States comply with most of the rules of International Law most of the time."*[427]

Why do states readily comply? Most international law is based on treaties signed by states and states' own customs. They comply with international law because they make the rules to suit themselves. Moreover, it is in their interest to be seen as trustworthy partners in the international space. At the same time, it offers tools to control states that step out of line.[428] International law often focuses on large global issues considered too big for a single government to tackle, such as large humanitarian crises, illicit trade, environmental issues, or multinational tax avoidance.

424 Vattel (Lonang Institute, 2005), Book II, § 326 (1,2,3), page 282.

425 Ibid. Book II, § 329. 4. Arbitration, page 282-283.

426 "*About us,*" (Permanent Court of Arbitration, established in 1899), accessed on Feb 19, 2024, https://pca-cpa.org/en/about/

427 Lowe (2007), Chapter 1.6.

428 Ibid., Chapter 1.6, "One powerful reason why States do, and always have, complied with International Law is, therefore, that they make the rules to suit them. International Law constrains errant States, which seek to break away from established patterns of behaviour or to abandon treaty commitments that they have made."

It provides a crucial tool for state cooperation. Consequently, governments take international law seriously.

At the same time, this framework functions as a back door into national legal systems. Generally, most legal systems include a clause that international law becomes binding in national law. For example, the U.S. Constitution states that treaties shall be "the supreme law of the Land," and "the judges in every state shall be bound thereby, anything in the constitution or laws of any state to the contrary notwithstanding."[429] The Dutch constitution in turn tells us that international treaties and decisions made by "international law organizations" take precedence over national law.[430] In Germany, general rules of international law are seen as an integral part of German federal law, and these international rules take precedence over national laws and directly establish rights and duties domestically.[431]

This common approach, which sees international law and domestic law as the same legal system, with international law at the top of a hierarchy, is called *monism*. There is another approach, called *dualism*, which sees international law and domestic law as separate legal systems. Here, each state determines how international rules are applied at the national level.[432] The UK follows such a dualist approach. As a result, the provisions of an international treaty can only have effect in domestic law if they are written into or incorporated by domestic legislation. Therefore, provisions of treaties that are not made part of UK law are not usually recognized by UK courts.[433]

Despite the slight variations, these procedures and approaches stem from a time when international treaties concerned matters of war, and thus life and death. Each treaty was weighed carefully, viewed as a possible alteration to the constitution, and treated as such. For example, French political thinker and former Minister of Foreign Affairs Alexis de Tocqueville (1805–1859) observed that in the early days of the U.S., the single head of government had the exclusive right of making peace and war and concluding treaties of commerce (as well as raising armies and fleets).[434]

429 "*Constitution of the United States,*" (Constitution Annotated, Analysis and Interpretation of the U.S. Constitution), Article VI, accessed on February 19, 2024, https://constitution.congress.gov/constitution/

430 "*Artikel 94: Voorrang internationale rechtsorde boven nationale wet,*" (De Nederlandse Grondwet, Grondwet van 2022/2023), accessed on Feb 19, 2024, [Author: by "decisions of international law organizations" one can think about United Nations Security Council Resolutions]. https://www.denederlandsegrondwet.nl/id/vlxups1a6ej6/artikel_94_voorrang_internationale

431 Butchard, Partick, "*Briefing Paper, Number 9010, September 21, 2020, Principles of international law: a brief guide,*" (House of Commons Library, 2020), page 3, Box 2.

432 Ibid., page 3.

433 Ibid., page 3-4.

434 Tocqueville (2006), Summary Of The Federal Constitution:

Treaties functioned exclusively as instruments for managing significant diplomatic relations between states, rather than as policy tools. Nowadays, international treaties and soft laws are passed on a wide range of topics and with a high level of detail. No single person has a complete overview of all laws passed, let alone an understanding of the long-term implications for public policy, liberty, and the social contract. In a sense, a new reality emerged: governance through treaty.

International Law and the Reduction of Individual Liberty

> *"The only answer to the incompetent nation state is the illusion of effective cooperation between those states to reach for goals that lie beyond the reach of each of them."*
>
> ~Thomas Henry Bingham

We saw in the previous chapter that international law determines the rights and duties of states. Lowe added that it governs all activities of public authorities that involve a foreign element, including foreign citizens.[435] This implies that, in theory, international law does apply to the dealings of individuals, but *only* as far as they involve a state. Lauterpacht called this the orthodox positivist doctrine, explicit in the affirmation that only states are subjects of international law.[436]

The international law practice, however, reveals a different story. Lauterpacht observed this change as early as 1950. He noted that with the Charter of the United Nations, the individual has acquired a status and a stature which has transformed him from an object of international compassion into a subject of international right.[437] Moreover, international law applies to private individuals in specific cases: pirates, those subject to international sanctions, and soldiers' conduct during wartime.[438] Other non-state persons and bodies are often made subjects of international rights

"Prerogative Of The Federal Government Power of declaring war, making peace, and levying general taxes vested in the Federal Government—What part of the internal policy of the country it may direct—The Government of the Union in some respects more central than the King's Government in the old French monarchy. The external relations of a people may be compared to those of private individuals, and they cannot be advantageously maintained without the agency of a single head of a Government. The exclusive right of making peace and war, of concluding treaties of commerce, of raising armies, and equipping fleets, was granted to the Union."

435 Lowe (2007): Chapter 1.5, *"International Law governs all activities of states that involve a foreign element: that is to say, all dealings by public authorities with foreign States or foreign citizens or with matters outside the borders of the State."*

436 Lauterpacht (1950), Part I, Section I, Chapter 1, 2. The Positivist Doctrine, page 6.

437 Ibid., Part I, Section I, Chapter 1, The Traditional Doctrine and the Practice of States, page 4.

438 Ibid., Part I, Section I, Chapter 1, 3. The Practice of States, pages 9-10.

and duties.[439] Examples include the previously mentioned NGOs and IOs with delegated authority over policy fields, as well as the diplomats working for them. Even when persons lack status under an international law instrument, states can still enforce their rights on their behalf. More crucially, the adoption of definite rules from international law instruments creates individual rights and obligations that are enforceable by national courts.[440]

Lauterpacht, again, back in 1950, observed that paradoxically, "the individual in his capacity as an alien enjoys a larger measure of protection by international law than in his character as the citizen of his own state."[441] For example, the International Covenant on Civil and Political Rights stipulates that each state party must ensure the rights in the covenant to "all individuals within its territory and subject to its jurisdiction."[442] The UN's Human Rights Committee has explained that "the rights set forth in the Covenant apply to everyone, irrespective of reciprocity, and irrespective of his or her nationality or statelessness."[443] This knowledge clarifies the challenges in managing migration into Western nations: international law secures specific rights for these migrants. And with the superior status of international law over local law, we achieved the strange situation that sometimes the rights of aliens prevail over the rights of citizens.[444] One group is assigned rights without duties, the other duties without rights.

More examples of the direct influence of international law on our lives could be seen during the COVID-19 crisis. On January 30, 2020, the World Health Organization (WHO) declared a "Public Health Emergency of International Concern" (PHEIC) and characterized the outbreak as a pandemic on March 11, 2020.[445] These were not mere casual observations. A WHO-declared PHEIC triggers the enforcement of the

439 Ibid., Part I, Section I, Chapter 1, 4. Public International Bodies as Subjects of International Law, page 12.

440 Ibid., Part I, Section I, Chapter 2. The Individual as a Subject of International Rights and Duties, pages 27 & 28-29 [Author: Lauterpacht cites a Polish court enforcing rights and duties created by a German-Polish convention in 1919].

441 Ibid., Part I, Section II, Chapter 7, 4. The Doctrine of Humanitarian Intervention, page 121.

442 "*International Covenant on Civil and Political Rights,*" (United Nations, General Assembly resolution 2200A (XXI), Adopted 16 December 1966), Art. 2.(1)

443 United Nations, "*The Rights of Non-citizens,*" (Office of the United Nations High Commissioner for Human Rights, New York and Geneva, 2006), page 8.

444 Author: in the Netherlands and various other countries in Europe, asylum seekers receive preference in social housing and are even housed in hotels at the expense of the native citizen tax-payer.

445 "*Coronavirus disease (COVID-19) pandemic,*" (World Health Organization, Geneva, Switzerland), accessed on Feb 20, 2024, https://www.who.int/europe/emergencies/situations/covid-19

2005 International Health Regulations (IHR),[446] a treaty signed by 193 countries. Furthermore, governments' actions during the pandemic were also not coincidental. They followed international standards to restrict travel, impose track-and-trace apps, coordinate medical responses, and delegate authority to WHO-supervised expert groups.[447] Moreover, the WHO and UN issued combined guidance calling for the proper dissemination of information.[448] Subsequently, social media companies began censoring all 'unofficial' information deviating from 'official' information

446 WHO, "*International Health Regulations, Second Edition,*" (World Health Organization, Geneva, 2005), Article 1: "'public health emergency of international concern' means an extraordinary event which is determined, as provided in these Regulations: (i) to constitute a public health risk to other States through the international spread of disease; and (ii) to potentially **require a coordinated international response**;" Article 12(1): "*The Director-General shall determine, on the basis of the information received, in particular from the State Party within whose territory an event is occurring, whether an event constitutes a public health emergency of international concern in accordance with the criteria and the procedure set out in these Regulations.*"

447 Ibid., Article 4(1): "*Each State Party shall designate or establish a National IHR Focal Point and the authorities responsible within its respective jurisdiction for the implementation of health measures under these Regulations.*" Article 18(1): "*Recommendations with respect to **persons**, baggage, cargo, containers, conveyances, goods and postal parcels:*
– require medical examinations;
– require vaccination or other prophylaxis;
– place suspect persons under public health observation;
– implement quarantine or other health measures for suspect persons;
– implement tracing of contacts of suspect or affected persons;
– refuse entry of suspect and affected persons;
– refuse entry of unaffected persons to affected areas; and
– implement exit screening and/or restrictions on persons from affected areas."

448 "*Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation – Joint statement by WHO, UN, UNICEF, UNDP, UNESCO, UNAIDS, ITU, UN Global Pulse, and IFRC,*" (UNICEF, New York, 23 September 2020), accessed on Feb 20, 2024, https://www.unicef.org/press-releases/managing-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-harm: "*...the UN Secretary-General launched the United Nations Communications Response initiative to combat the spread of mis- and disinformation in April 2020.*" "*...WHO Member States passed Resolution WHA73.1 on the COVID-19 response. The Resolution recognizes that managing the infodemic is a critical part of controlling the COVID-19 pandemic: it calls on Member States to provide reliable COVID-19 content, take measures to counter mis- and disinformation and leverage digital technologies across the response...*" "*We call on Member States to develop and implement action plans to manage the infodemic by promoting the timely dissemination of accurate information, based on science and evidence, to all communities, and in particular high-risk groups; and preventing the spread, and combating, mis- and disinformation while respecting freedom of expression.*" "*We further call on all other stakeholders - including the media and social media platforms through which mis- and disinformation are disseminated, researchers and technologists who can design and build effective strategies and tools to respond to the infodemic, civil society leaders and influencers - to collaborate with the UN system, with Member States and with each other, and to further strengthen their actions to disseminate accurate information and prevent the spread of mis- and disinformation.*"

of the WHO. We can thus conclude that international law now regulates private individuals in the most intimate aspects of their lives, including essential freedoms such as movement, association, and speech.

> *"Global governance is commonly defined as the process of cooperation among transnational actors aimed at providing responses to global problems. ...without appropriate global governance, we will become paralysed in our attempts to address and respond to global challenges, particularly when there is such a strong dissonance between short-term, domestic imperatives and long-term, global challenges."*
>
> ~Klaus Schwab (World Economic Forum)

The Attack on Blockchain Technology

Another major international regulatory process is underway as we speak in the crypto industry. This effort is led by organizations such as the Financial Action Task Force on Money Laundering (FATF) and the Organisation for Economic Co-operation and Development (OECD). These IOs have established a multinational approach to combat money laundering[449] and tax evasion.[450]

In 2021, authorized by the G20 (a convention of the world's 20 largest states), the FATF launched its *Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers*.[451] It set several key standards. These included designating all crypto intermediaries as virtual asset service providers (VASPs). VASPs, as regulated entities, must record and monitor their users' transactions. It further designated regular wallets used in peer-to-peer activities as "unhosted wallets," singling them out for increased monitoring and possible future restrictions.

449 *"What we do,"* FATF, accessed on April 3, 2018, http://www.fatf-gafi.org/about/whatwedo/: *"The Financial Action Task Force (FATF) was established in July 1989 by a Group of Seven (G-7) Summit in Paris, initially to examine and develop measures to combat money laundering."*

450 OECD, *"Standard for Automatic Exchange of Financial Account Information in Tax Matters, Second Edition,"* (OECD, 27 March 2017), accessed on April 3, 2018, https://www.oecd.org/tax/exchange-of-tax-information/standard-for-automatic-exchange-of-financial-account-information-in-tax-matters-second-edition-9789264267992-en.htm *"The Standard draws extensively on earlier work of the OECD in the area of automatic exchange of information. It incorporates progress made within the European Union, as well as global anti-money laundering standards (editor: FATF), with the intergovernmental implementation of the Foreign Account Tax Compliance Act (FATCA) having acted as a catalyst for the move towards automatic exchange of information in a multilateral context."*

451 FATF, *"Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers,"* (FATF, Paris, 28 October 2021), https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html

It also initiated steps to restrict privacy coins, privacy tools like mixers, and DeFi. The author wrote an extensive article on this guidance,[452] which went viral on social media and was picked up by several major publications and YouTube channels.[453] At that time, most of the crypto industry still believed that financial regulations would not apply to blockchain technology. Since then, these standards have been carried out worldwide, leading to various legal consequences, including privacy coins being delisted.[454] However, as each state individually integrates these standards into its legislation, few people understand the global scope and origin of these regulations.

The next year, the OECD launched its *Crypto-Asset Reporting Framework and Amendments to the Common Reporting Standard*.[455] This report applied the tax reporting framework, originally effected to combat tax evasion practices highlighted by the Panama Papers—albeit in a far more invasive manner. Regular financial institutions are only required to provide their clients' account information and annual balance statements to the tax authorities in the clients' countries of residence. VASPs, however, must now record and label all individual transactions, collect addresses of unhosted wallets like cold storage, and report all this information.[456]

452 Thysse W., *"FATF Global Crypto Regulations Summary - June 2021"* (Decentralized Legal System, June 22, 2021), https://decentralizedlegalsystem.com/wp-content/uploads/2021/06/FATF-Global-Crypto-Regulations-Summary-June-2021.pdf [Author: I wrote my article based on the draft version that was issued in June 2021, because I know from experience that these public consultations mainly function to keep up the appearance that the public has a say in things. I rightly observed that the core regulations did not change].

453 *"FATF Crypto Proposals: MASSIVE Hidden RISK?!!,"* (Coinbureau, Aug 7, 2021), accessed on Dec 12, 2024, https://www.youtube.com/watch?v=cZyTDJPnp14

454 Chipolina, Scott, *"Binance delisting sparks privacy concerns,"* (Financial Times, London, February 9, 2024), accessed on Sep 27, 2024, https://www.ft.com/content/971ac694-f250-412c-9fe0-f956378a751a.

455 OECD, *"Crypto-Asset Reporting Framework and Amendments to the Common Reporting Standard,"* (Paris, 10 October 2022), accessed on March 20, 2025, https://web-archive.oecd.org/temp/2023-11-10/642426-crypto-asset-reporting-framework-and-amendments-to-the-common-reporting-standard.htm.

456 Thysse W., *"OECD Crypto Asset Reporting Framework Summary – October 2022 – V1"* (Decentralized Legal System, Oct 17, 2022), available on: https://decentralizedlegalsystem.com/wp-content/uploads/2022/10/OECD-Crypto-Asset-Reporting-Framework-Summary-October-2022-V1.pdf, page 8: *"Transactions will be reported by type of Crypto Asset, and will distinguish between outward and inward transactions. In order to enhance the usability of the data for tax administrations, the reporting is to be split out between Crypto-to-Crypto and Crypto Asset-to-fiat transactions. Reporting service providers will also be forced to label transfers (e.g. airdrops, income derived from staking or a loan), in instances where they have such knowledge." "In short, the CARF mandates that information an all trades, including the type of coin, the amount of coins, the market value, and what was paid, be submitted. This info is then aggregated and automatically exchanged. 24 The goal is to inform the tax authorities of how much you own and what kind of income you generated from your holdings."*

These IOs, not being states, lack direct law enforcement power. They cannot make 'hard' law. Instead, they create 'soft' law, expressed as 'recommendations.' In practice, states often have no choice but to accept; non-compliance risks placement on 'gray' or 'black' lists of 'non-cooperative jurisdictions,'[457] potentially restricting their access to the global financial system. The Canadian government explains why they adhere to soft law recommendations as follows:

"Although the standards set by the FATF are not legally binding, as a member, Canada is obligated to implement them and to submit to a peer evaluation of their effective implementation. Not meeting this commitment could lead to a number of sanctions, from enhanced scrutiny measures to public listing, and, in the extreme, suspension of membership from the FATF. Furthermore, non-compliance could cause reputational harm to Canada's financial sector and subject Canadian financial institutions to increased regulatory burdens when dealing with foreign counterparties or when doing business overseas."[458]

With the general audience, these policies are better known as KYC (know your customer) and AML (anti–money laundering) legislation. While on the face of it these seem noble goals, Ron Pol, a respected AML researcher, called the policy a viable candidate for the title of least effective policy initiative, ever, anywhere.[459] He discovered that AML policy intervention has less than a 0.1 percent impact on criminal finances. Moreover, compliance costs exceed recovered criminal funds by more than a hundredfold, penalizing banks, taxpayers, and ordinary citizens more than criminal enterprises.[460] Despite a policy framework with complex laws spanning the globe, the AML experiment is markedly ineffective.[461] To make matters worse, AML policies are not subject to standard public policy cost-benefit analysis, and no relevant data is collected or measured. The absence of adequate success metrics likely contributes to the little awareness of policy failure. Pol explains that the minimal data that is available suggests three decades of policy results measured as a fraction of a percentage point away from complete failure.[462]

457 *"High-risk and other monitored jurisdictions,"* (FATF), accessed February 21, 2024, https://www.fatf-gafi.org/en/publications/High-risk-and-other-monitored-jurisdictions.html

458 "*Regulations Amending the Proceeds of Crime (Money Laundering) and Terrorist Financing Regulations and the Proceeds of Crime (Money Laundering) and Terrorist Financing Administrative Monetary Penalties Regulations: SOR/2022-76,"* (Canada Gazette, Part II, Volume 156, Number 9, SOR/2022-76 April 5, 2022), https://www.gazette.gc.ca/rp-pr/p2/2022/2022-04-27/html/sor-dors76-eng.html, accessed on Feb 22, 2024.

459 Pol, Ronald F., "*Anti-money laundering: The world's least effective policy experiment? Together, we can fix it,"* (Policy Design and Practice, 3:1, 73-94, 2020), https://doi.org/10.1080/25741292.2020.1725366, page 89.

460 Ibid., Abstract.

461 Ibid., page 75.

462 Ibid., page 74.

The United Nations Office on Drugs and Crime (UNODC) revealed already in 2011 that globally less than 1 percent (probably around 0.2 percent) of the proceeds of crime laundered via the financial system are seized and frozen.[463] In the U.S., bottom-line metrics suggest that money laundering enforcement fails 99.9 percent of the time. Or as American financial crime expert Raymond Baker noted, "total failure is just a decimal point away."[464]

With overwhelming evidence that AML has been ineffective in preventing illicit money flows, let alone reducing crime, why is it being expanded upon? Like many policies, there are the stated and the real objectives. After all, the infrastructure for monitoring criminal transactions can be repurposed to enforce policy aims. The first example is cited above: the restriction of cryptocurrencies (direct competitors to government-issued fiat currency). Another example is central banks' behind-the-scenes efforts to expand their mandate to enforce climate change policies. The BIS argues that climate change causes financial instability and must therefore be part of central banks' risk policy.[465] The IMF, in turn, wants this framework to assist with future monetary policy, for example, by discouraging depositors from withdrawing their money out of the bank during periods of negative interest rates (breaking through the 'zero lower bound').[466] The BIS uses KYC and AML as an excuse to argue that future central bank digital currencies cannot be privately transacted like regular cryptos but must be accessed through intermediaries and

463 UNODC, "*Estimating Illicit Financial Flows Resulting from Drug Trafficking and Other Transnational Organized Crimes,*" (United Nations Office on Drugs and Crime, Vienna, 2011), https://bit.ly/1vb26h8, page 7.

464 Baker, Raymond, "*Capitalism's Achilles Heel,*" (Hoboken, New Jersey: Wiley & Sons Publishing, 2005), page 173.

465 BIS, "*Core Principle for effect banking supervision,*" (Basel Committee on Banking Supervision, April 2024), https://www.bis.org/bcbs/publ/d573.htm: Page 7: "*Climate change may result in physical and transition risks that could affect the safety and soundness of individual banks and have broader implications for the banking system and financial stability. Targeted changes have been introduced to explicitly reference climate-related financial risks and to promote a principles-based approach to improving supervisory practices and banks' risk management.*" [Author: banks are forced by AML legislation to assess the activities of their clients and the risks associated with it. Regulators can now assign a high risk profile to activities deemed undesirable. As such, the framework is in play for banks to play a role in enforcing climate policy. Here is a list of central banks open to this idea (almost all of them): "*Membership,*" (Central Banks and Supervisors Network for Greening the Financial System), accessed on April 29, 2024, https://www.ngfs.net/en/about-us/membership].

466 Agarwal, Ruchir, Kimbali, Miles, "*Breaking Through the Zero Lower Bound,*" (IMF Working Paper, WP/15/224, 2015), page 3: "*We show here how the combination of (a) using electronic money as the unit of account and (b) a time-varying paper currency deposit fee can be used to eliminate the option to circumvent the negative rates by withdrawing, storing and, later, redepositing paper currency.*"

associated with (digital) identities.[467] And the American Justice Department used this infrastructure to 'choke' out companies that the administration considered high risk or otherwise objectionable by limiting their access to financial services despite them being legal businesses.[468] Operation Choke Point established a precedent that regulators later applied to restrict cryptocurrency companies' banking access as well.[469] Indeed, from the perspective of establishing a global regulatory framework to directly intervene with the rights and duties of private citizens, it is not a policy failure at all!

> *"Don't be angry, for such men are the most charming of the lot! They go on making laws and amending the laws, and they always believe they are going to make an end of frauds in all contracts, and they can't see they are only cutting of the Hydra's heads!"*
> ~Plato

§ 4.4. Unbalanced Power

> *"AT ONE TIME the Horse had the plain entirely to himself. Then a Stag intruded into his domain and shared his pasture. The Horse, desiring to revenge himself on the stranger, asked a man if he were willing to help him in punishing the Stag. The man replied that if the Horse would receive a bit in his mouth and agree to carry him, he would contrive effective weapons against the Stag. The Horse consented and allowed the man to mount him. From that hour he found that instead of obtaining revenge on the Stag, he had enslaved himself to the service of man."*
> ~Aesop (Fables)

467 BIS, "*BIS Quarterly Review - International banking and financial market developments,*" (BIS, Basel, March 2020), https://www.bis.org/publ/qtrpdf/r_qt2003.htm, page 94

468 "*Report: DOJ's Operation Choke Point Secretly Pressured Banks to Cut Ties with Legal Business,*" (Committee on Oversight and Accountability, Washington, May 29, 2014), accessed on Dec 12, 2024, https://oversight.house.gov/report/report-dojs-operation-choke-point-secretly-pressured-banks-cut-ties-legal-business/

469 Schiller, Benjamin, "*Proof of Operation Chokepoint 2.0,*" (Coindesk, Dec 8, 2024), accessed on Dec 12, 2024, https://www.coindesk.com/opinion/2024/12/06/proof-of-operation-chokepoint-2-0

> *"But as it is human to err, so it will not seem wonderful that nations have erroneously considered those things the law of nature which are diametrically opposed to it, and that perverse customs have arisen therefrom, by which right has been transformed to reckless licence...an unjust customary law of nations, by which the most sacred name of law is defiled."*
>
> ~Christian Wolff

IOs now directly regulate (and in many cases restrict) the behavior of individuals and private organizations. One could argue that these regulations alter the basic concept of international law. They are neither based on treaties nor acceptance but are designed by non-state actors and enforced in a top-down fashion. Moreover, they expand the scope of international law by directly altering the rights and duties of private parties. This changes our legal system.

What is most surprising is how oblivious the general population is to what is going on. The process is poorly understood, rarely debated, and certainly not explained. American diplomat to the EU Todd Huizinga observed the discrepancy between the will of the people and their leaders. Within the EU, policymakers and politicians are devoted to dissolving European nation-states into a single entity, an 'ever greater union.' Meanwhile, they present a charade of pursuing national interests to voters back home.[470] It has gotten to a point that national governments hold mock debates on topics already delegated to EU institutions, such as the digital Euro.[471] International regulators do the same at the international level: say one thing, do the other.

470 Huizinga, Todd, "*The New Totalitarian Temptation - Global Governance and the Crisis of Democracy in Europe,*" (Encounter Books, New York, 2016), page 43: '*The institutional growth of what is now the EU has come about through an unbending and dogged pursuit of "ever closer union," imposed from the top down, by a process shrouded in obscurity and crowned with a series of significant triumphs.*" Page 51: "*By stealth and subterfuge, ever closer union is to be made inevitable. This means overriding any voters, even majorities of voters, if they stand in the way.*" Page 194: "*They might try to appear more responsive to voters' concerns in talks with them at home, but as for their discussions in Brussels, the voters would never find out what they really talked about.*"

471 DNB, "*Digitaal centralebankgeld – Doelstellingen, randvoorwaarden en ontwerpkeuzes,*" (De Nederlansche Bank, Amsterdam, 2020), https://www.rijksoverheid.nl/documenten/kamerstukken/2020/04/21/bijlage-digitaal-centralebankgeld-doelstellingen-randvoorwaarden-en-ontwerpkeuze, page 28, [Author: in this report the Dutch central bank explains that the power to issue the Euro and determine its form has long been delegated to the ECB. One of the main critics of the Digital Euro in the Netherlands, Mahir Alkaya, left the House of Representatives disillusioned after endless meaningless debates, declaring we live in a sham democracy (schijndemocratie)].

The current rules-based order has shifted, both philosophically and practically, from the guiding principle of equality for all people and states. It abandoned the idea of universal law based on higher principles. Modern international law transformed from a neutral system for balancing the rights and duties of states toward a tool for activism, power dynamics, and the leveraging of various ongoing 'emergencies.' Small states are forced to adopt policies regardless of the consent of their population or representative government. They lack a voice and face repercussions for non-compliance, including blacklisting, economic sanctions, or worse. Historic legal scholars and legislators prioritized morality and balancing the rights and duties of equals in their pursuit of elevating legislation. Modern lawmakers, on the other hand, seem obsessed with reducing complex human life into numbers and dashboards that can be measured, modeled, and optimized. Even utilitarian objectives like maximizing human flourishing and minimizing harm are no longer part of the debate. The discourse now revolves solely around the objectives of the IOs themselves.

Those working at IOs who negotiate, draft, and ultimately enforce international law are protected by both the anonymity of their office and the 1961 Vienna Convention on Diplomatic Immunity. This grants them immunity for their actions while in office and exempts them from administrative burdens, such as fines and taxes, in the countries where they operate.[472] There is no parliament or people's representative with the right of initiative to amend or correct international law. There is no democratic way of directing policy or removing people from positions of power. Moreover, it is unclear who participates in drafting the legislation at this level; conflict-of-interest safeguards or oversight committees are not in place. While parliaments may vote after the fact, this is often ignored or circumvented through new treaties or the misuse of existing ones. In both spirit and letter, international regulation prioritizes policy objectives over state and individual rights. Ironically, national constitutions aimed at protecting civil and human rights often detail exactly how these international treaties supersede them.

International standard-setting ignores many basics of law-making. Laws should be known, transparent, and predictable. Looking at the example of financial regulation, the broad nature of international standards leaves much open to interpretation by those who enforce them in the real world: financial institutions. Consequently, each institution interprets these laws differently, scrutinizes financial transactions according to its own biases and risk parameters, and subordinates customer rights

472 UN, "*United Nations Conference on Diplomatic Intercourse and Immunities,*" (Vienna, 2 March - 14 April 1961), accessed on June 10, 2021, https://legal.un.org/ilc/texts/instruments/english/conventions/9_1_1961.pdf

to its own incentives (such as profitability).[473] The process is opaque since banks isolate compliance departments from direct customer contact. As a result, citizens often find their property rights restricted without a conviction or even knowing their offense. This global regulatory uncertainty inflicts incalculable damage.

Individuals have no recourse against these standards. There is no court where one can challenge issues on matters of international law. Judges can—and often must—recognize international law in their rulings. But they do not have the authority to challenge or alter international law itself—it is a one-way street. Moreover, activist groups now use treaties in lawsuits to force private parties to align with global standards, such as climate policies,[474] a practice known as 'public interest litigation.' The validity of these cases is not in question here. What matters is the direct influence of international law on private life and how this form of rule-making bypasses democratic oversight and the checks and balances deemed essential in sound administration. It transforms the core of the systems governing our lives. This has not gone unnoticed. Oxford University Press maintains an entire book series exploring this topic: *Transformations in Governance*.[475]

Once you understand the process, you see it everywhere. First, the media stirs up a 'crisis.' NGOs and IOs provide reports with scientific justification—based on

473 "*Grijstonen in de wereld van compliance en zakenethiek | #1673 met Geert Vermeulen & Michelle Fisser,*" (De Nieuwe Wereld TV, Aug 14, 2024), accessed on Jan 7, 2025, https://www.youtube.com/watch?v=jojC4Hmurw4 [Author: one compliance officer in the interview introduces the concept of 'Compliance 3.0,' where banks now designate certain customer behavior as 'lawful but awful'—meaning they risk reputational damage by accepting certain clients despite their compliance with the law.].

474 *"Notice of Liability to ING,"* (Mileudefensie January 19th, 2024), accessed on March 20, 2025, https://en.milieudefensie.nl/news/this-is-our-official-letter-to-ing, [Author: Milieudefensie is a Dutch NGO which is directly suing multinationals who they think are not acting in line with the Paris Climate Accords. They won a case against Shell, one of the world's largest producers of fossil fuels. They are now targeting the large multinational bank ING, aiming to regulate what businesses they can and cannot finance. The excerpt below is from their Notice of Liability. These activities are now rolled out to other countries as well]: *"ING's current climate policy is flawed and leads to unacceptable greenhouse gas emissions. ING is consequently undermining achieving the 1.5°C target required by the Paris Agreement. This poses a great danger to society, the environment and nature. It also leads to human rights violations in the Netherlands and in the rest of the world, for current and future generations. In this letter Milieudefensie explains that ING's current policy is unlawful with regard to the public interest that Milieudefensie seeks to protect. Milieudefensie holds ING liable for this and requests that it eradicate this unlawful situation urgently. ING must see to it that ING's climate policy, financing and services be brought in accordance with the 1.5°C target of the Paris Agreement. In this letter we will explain and present the basis for our claims. We will explain the legal obligations and ING's breach of these obligations."*

475 "*Transformations in Governance,*" (Oxford University Press), accessed on Aug 12, 2024, https://global.oup.com/academic/content/series/t/transformations-in-governance-tig/

models rather than empirical analysis—urging immediate global action. The people are mobilized to demand action. A 'task force' is formed at the G20 level or within existing associations like the EU, UN, OECD, or WHO. An avalanche of regulatory standards follows (often surprisingly) shortly after. Finally, national politicians eagerly sign these policies into law. Their motivations vary: some act on ideological conviction; others fear coordinated sanctions from the global community or potential reputation damage. Others may be tempted by future cushioned positions. Many simply follow 'the science' or the latest 'international standards' without giving it any thought. States that do not play along get sued or sanctioned into compliance. The general population reluctantly complies with these policies, wondering why elected officials prioritize international over their national concerns. They remain largely unaware of the supranational coordination going on, and the eroding ability for self-determination with each treaty signed. And then the media stirs up a new crisis. Rinse, repeat...

The ease with which one department of a single international organization can shape global standards astounds at times. Yet, once formalized, withdrawing these policies requires adjusting the laws of all adoptive countries. This is why law-making done at this level should be done with great care. Unfortunately, we see the opposite. It almost appears that state executives seem eager to push authority to the international level, allowing them to coordinate policies with like-minded individuals away from pesky voters. The crypto community should be particularly concerned, as cryptocurrency regulation takes shape at this level. Moreover, the laws passed so far do not facilitate the peer-to-peer economy. On the contrary, they are a frontal assault on it.

Is International Law Decentralized?

Despite its inherent risk of concentrating law-making powers with a few institutions, one could argue that international law itself is decentralized. It requires no central authority to be effective because it is largely followed voluntarily. If such a system can exist on such a large scale, it surely can exist on a smaller one too. Crucially, contemporary international law largely originates outside the direct control of national governments. This leads to a notable conclusion:

> *There is no need for the involvement of national governments to create law. Once a piece of legislation or a practice becomes accepted and recognized, it eventually becomes part of international law, one of the highest and most influential forms of law in existence!*

If an unelected group of diplomats can author worldwide accepted regulations based on their interpretation of reality, can the crypto industry do the same? Can

we initiate private, voluntary law not hindered by borders? This rhetorical question is explored in the next chapter.

§ 4.5. Summary and Interpretation

International law considers the body of rules and principles that determine the rights and duties of states. It comprises the rules and principles which are generally observed in interstate relations, primarily in respect of their dealings with other states and the citizens of other states. It plays a role in defining what constitutes a state and its territorial boundaries.

Key Takeaways:

- International law originated from rules governing war, peace, and trade between nations.
- Grotius and other scholars like Vattel shaped modern international law theory.
- International law is based on treaties, customary practices, and general principles recognized by nations.
- More than three hundred international organizations (IOs) play a major role in creating international regulations on a wide variety of topics.
- Soft laws created by IOs are implemented as civil laws without much scrutiny or delay.
- IOs claim jurisdiction to deal with global challenges and emergencies deemed too large for individual states to tackle alone.
- The coordinated response to COVID-19 illustrates the reach of international law.
- International law now affects fundamental liberties such as movement, association, and speech, as well as financial privacy and freedom. It regulates areas such as finance, banking, tax, energy, the environment, and cryptocurrencies.
- There is a growing imbalance in the legal system, with international law increasingly superseding natural, civil, and private law.
- Contemporary international law prioritizes policy objectives over state and individual rights.

- Individuals have limited recourse to challenge or influence international law due to a lack of proper forums, representation, checks and balances, and judiciary review.
- The process of creating and adopting international law is opaque and poorly understood by the general public.
- International law policies such as know your customer and anti–money laundering expand into cryptocurrencies. Enforcement demands the use of intermediaries. This diametrically opposes peer-to-peer technology.
- Private parties now monitor each other to enforce international policy objectives.

The current framework of international law represents a significant shift from the original principles and purpose of the legal system. Natural law demanded the balancing of rights and duties between individuals and subsequently between single states. The contemporary international legal order imposes policies in a top-down fashion—at the expense of individual and state rights—and without proper safeguards, diminishing both liberty and democratic self-determination.

The cryptocurrency industry stands at a crossroads. If it wants financial liberty and a peer-to-peer financial system, then it must address international law, because this is where cryptocurrency regulation is coordinated. Explaining how this is done was one of the secondary goals of this book—to offer an alternative was the main one.

V

Private Law – Law by Consent

During the 2024 Olympics in Paris, Vinesh Phogat became the first Indian woman wrestler to reach an Olympic final after she won three straight bouts, including the opener against the world's No. 1 and then-defending champion Yui Susaki of Japan. While she was well within the permissible limit during the weigh-in before the preliminary rounds, her weight increased by almost three kilos by Tuesday night. Vinesh stayed awake all night before the gold-medal bout, jogging and skipping to lose weight. Her support staff even went to the extent of cutting her hair and drawing out blood. However, the twenty-nine-year-old was still found to be one hundred grams over the allowed limit during the morning weigh-in. Vinesh was denied the opportunity to compete in the final and a guaranteed silver medal.[476]

Vinesh, supported by the Indian Olympic Association, appealed the disqualification with the Court of Arbitration for Sport (CAS). The CAS composed an arbitral tribunal and appointed a sole arbitrator to hear and rule on the case. This arbitrator measured the arguments provided by the parties in dispute against the Olympic Charter and the applicable regulations. These clearly provide no tolerance at weigh-in. More importantly, they do not grant the arbitrator the power or discretion to deviate from the regulations for any reason. The measurement proved valid, and Vinesh's application was dismissed.[477]

What makes this case interesting is that the International Olympic Committee is not a government organization. No parliament or government representative drafted its

476 "'*100 grams excess weight was caused by...': What Vinesh Phogat revealed to CAS over weigh-in fiasco at Paris Olympics,*" (Hindustan Times, Aug 12, 2024), accessed on Sep 29, 2024, https://www.hindustantimes.com/sports/olympics/100-grams-excess-weight-was-caused-by-what-vinesh-phogat-revealed-to-cas-over-weigh-in-fiasco-at-paris-olympics-101723429456924.html

477 "*CAS OG 24/17 Vinesh Phogat v. United World Wrestling & IOC,*" (COURT OF ARBITRATION FOR SPORT (CAS), Ad hoc Division – Games of the XXXIII Olympiad in Paris), Lausanne, 16 August 2024, https://www.tas-cas.org/fileadmin/user_upload/OG_24-17_Award__for_publication_.pdf

applicable laws. Moreover, the CAS is not an official court of the Swiss government. The fate of Vinesh's medal aspirations was decided on by a private court, enforcing private laws. By examining the workings of such private legal systems, a potential framework for integrating blockchain technology into law emerges.

Defining Private Law

The Romans first made the distinction between public law, governing the relationship between individuals and the state, and private law, governing relationships between individuals.[478] The 2006 edition of the *Oxford Dictionary of Law* defines private law as follows:

> *"The part of the law that deals with such aspects of relationships between individuals that are of no direct concern to the state. It includes the law of property and trust, family law, the law of contract, mercantile law and the law of tort."*[479]

In this definition, private law refers to aspects of civil law regulating private interactions, such as laws on the qualification of when a will is valid or what is needed for a contract to be enforced by the courts. Consequently, private engagements are regulated—and restricted in scope—by civil and international law frameworks. What the case of Vinesh teaches us, though, is that within this framework, private parties can set their own standards. This is the topic of interest here: the many areas where private individuals govern themselves. In the remainder of this book, private law refers to law established between private individuals in the coordination of their private affairs.

§ 5.1. Private Sources of Law

Private individuals and private organizations pen the laws to govern their actions in a variety of areas. One can think about business transactions, international trade, family affairs, private societies, sports associations, labor unions, religious organizations, and, of course, blockchain projects. These examples represent

478 Feldbrugge, F.J.M., *"Private Law and Public Law,"* (Koninklijke Brill NV, Leiden, 2009), page 1: *"The earliest solution was offered by the Roman jurist Ulpian who stated: 'Public law is what regards the welfare of the Roman state, private law what regards the interests of individual persons; because some things are of public, others of private utility.' D.I.1.2. Publicum ius est, quod ad statum rei romanae spectat, privatum quod ad singulorum utilitatem; sunt enim quaedam publice utilia, quaedam privatim. The passage was included in the introductory chapter of Justinian's Institutions, which may explain why it was so well known."*

479 Martin, E., editor, "*The Oxford Dictionary of Law,*" (Oxford University Press, 2006), page 411.

merely a selection of the many areas that are the almost exclusive territory of private individuals. Private law is one of the ways smart contracts and decentralized endeavors are regulated as well.

To clarify the large impact of private law on the world, this chapter highlights three examples: Lex Mercatoria, copyright law, and the regulation of large sporting events.

Lex Mercatoria

The exact definition of Lex Mercatoria is debated, but it refers to a system of customary law developed during the Middle Ages governing international trade. Rather than a law belonging to one country, it could be considered as a general law of nations.[480] It was, in fact, the result of a widely accepted practice for industries to regulate their own affairs.

As explained by Berman, it was in the eleventh and twelfth centuries that the basic concepts and institutions of Lex Mercatoria were formed. This was a time when great international fairs were held regularly in scores of cities and towns throughout Europe. International markets were common, especially in seaport towns. These fairs and markets were complex organizations and developed a special 'law merchant.' It included not only the customary law of fairs and markets but also maritime customs relating to trade and, finally, the commercial laws of the cities and towns themselves. The law merchant, then, governed a special class of people (merchants) in special places (fairs, markets, and seaports), and it governed mercantile relations in cities and towns.[481]

The merchants constituted a self-governing community, divided into religious brotherhoods, guilds, and other associations.[482] The market and fair courts they turned to for their rulings were non-professional community tribunals; the judges were elected by the merchants of the market or fair from among their numbers.[483] A key characteristic of these courts was their ability to provide swift rulings. The principle of speedy, informal, and equitable procedure in the commercial courts was, of course, a response to mercantile needs. That response could only be made, however, because of the communal, or participatory, character of commercial adjudication.[484] The merchants were, of course, members of the church and hence subject to the canon law. But they were also members of the mercantile community

480 Robert Allen, *"Lex Mercatoria,"* (World Encyclopedia of Law), accessed April 10, 2018, http://lawin.org/lex-mercatoria/ [Link broken - Dec 2019]

481 Berman (1983), page 341, [Author: paragraph summarized and edited for readability].

482 Ibid., page 346.

483 Ibid., page 346.

484 Ibid., page 348.

and hence subject to the law merchant.[485] An individual could thus be subject to different legal systems across various aspects of life.

In the late eleventh, twelfth, and early thirteenth centuries, mercantile law acquired the character of an integrated system of principles, concepts, rules, and procedures. The various rights and obligations associated with commercial relations came to be consciously interpreted as constituent parts of a whole body of law, the Lex Mercatoria. Many diverse commercial legal institutions devised at that time, such as negotiable instruments, secured credit, and joint ventures—together with many older legal institutions that were then refashioned—were all seen as forming a distinct and coherent system.[486] The law merchant governed various aspects of commercial transactions, including transportation, insurance, and financing.[487]

Occasionally, rules of mercantile law developed by merchants were collected and circulated. The Italian cities took the lead in collecting systematically and enacting the customary rules by which commercial activity was governed. One of the earliest examples was a collection of maritime laws adopted about the time of the First Crusade (1095) by the Republic of Amalfi on the Italian coast of the Tyrrhenian Sea, known as the Amalfitan Table; its authority came to be acknowledged by all the city republics of Italy. In about 1150, a compilation of maritime judgments by the court of Oléron, an island off the French Atlantic coast, was adopted by the seaport towns of the Atlantic Ocean and the North Sea, including those of England. The Laws of Wisby, a port on the island of Gotland in the Baltic Sea, were adopted around 1350, and they gained wide authority in surrounding Baltic countries. At about the same time, the Consolato del Mare, a collection of customs of the sea observed in the Consular Court of Barcelona, was developed. Based partly on earlier collections and partly on statutes and compilations of the Italian cities, it came to be accepted as governing law in the commercial centers of the Mediterranean. All these collections dealt exclusively with maritime law, including contracts of carriage of goods by sea.[488]

Despite Lex Mercatoria commonly being cited as the archetypal, sophisticated legal system that private groups create from custom when not impeded by the intermeddling of the state, empirically, the story is more nuanced. At least, that is what professor of law and legal historian Emily Kadens argued. As she explained, the customs the merchants applied often did not become uniform and universal because custom usually could not be transplanted and remain the same from place to place. Moreover, the use of local customs did not hamper international trade

485 Ibid., page 346.
486 Ibid., pages 348-349 [Author: paragraph edited for readability].
487 Ibid., page 334.
488 Ibid., pages 340-341, [Author: entire paragraph edited for readability].

because intermediaries such as brokers ensured that medieval merchants had no need for a transnational law. As demonstrated in the examples above, the aspects of commercial law that became most widespread arose from contract and statute rather than custom.[489]

Custom often lacks the sort of boundaries and definition created by the expression of a publicly or privately legislated rule at the point of its enactment.[490] Even during the medieval heyday of private compilations of local and regional custom, not a single one of the many literate and civically involved merchants of Europe appears to have attempted to write down a list or explanation of merchant sales customs.[491] By contrast, merchants could share contractual mechanisms easily. Merchant A learned of a way of transferring funds or establishing an agency relationship created by Merchant B and duplicated the terms. Perhaps he used the same notary who drew up the first document or one of the contract-form books that existed in the Middle Ages. New terms that came to be added to the contract by innovative parties could similarly spread through imitation.[492] This differs from one widely available uniform customary code.

Lex Mercatoria in the current age does not provide a codified framework that is accessible or clear or has established jurisprudence. Therefore, legal practitioners refrain from using it as governing law.[493] However, such a framework could be developed. In fact, work on the unification of private law into comprehensible legislation is being done, for example, by the International Institute for the Unification of Private Law (UNIDROIT).[494] This regulatory framework is explored further in Section II of this book. Additionally, with blockchain technology, we now have a tool to record customs, enact legislation, and transplant these practices around the world. Modern technology could fill in the shortcomings of Lex Mercatoria and help it succeed in the twenty-first century. More on this in Section III of this book.

489 Kadens, Emily, "*The Myth of the Customary Law Merchant,*" (Texas Law Review, Vol. 90, April 21, 2012), https://ssrn.com/abstract=2043550, page 1153, [Author: entire paragraph summarized and edited for readability].

490 Ibid., page 1159.

491 Ibid., page 1171, [Author: citing Charles Donahue].

492 Ibid., page 1162.

493 Moses, Margaret J., "*The Principles and Practice of International Commercial Arbitration,*" 3rd Edition, (Cambridge University Press, London, 2017, Mobi), Chapter 4C, The Lex Mercatoria

494 *"History and Overview,"* (UNIDROIT), accessed May 12, 2018, https://www.unidroit.org/about-unidroit/overview *"The International Institute for the Unification of Private Law (UNIDROIT) is an independent intergovernmental Organisation with its seat in the Villa Aldobrandini in Rome. Its purpose is to study needs and methods for modernising, harmonising and co-ordinating private and in particular commercial law as between States and groups of States and to formulate uniform law instruments, principles and rules to achieve those objectives."*

Copyright Laws

Copyright laws protect creative works. The Berne Convention provides international standards for the protection of works and the rights of their authors. Works originating in one of the "Contracting States" must be given protection around the world. This protection must not be conditional upon compliance with any formality (principle of 'automatic' protection). Protection includes every production in the literary, scientific, and artistic domain, "whatever the mode or form of its expression."[495]

The generous protections of creative works presented a problem for the open-source software community. After all, it would be impossible for every user to obtain written permission from the creator. Independent of government policies, private groups have come up with innovative ways of licensing creative work more flexibly, allowing free use without restrictions. Examples are Creative Commons licenses and the wide variety of open-source licenses that are popular in the crypto space.[496]

International Sports Organizations

Globally operating IOs hold significant power over sports activities, participating countries, and their athletes. They govern these activities for millions of athletes. The introduction of this chapter explains a case in the Olympics. The Fédération Internationale de Football Association (FIFA) is another example of a private organization that governs another global spectacle: the World Cup (one of the largest events in the world). And yet, it is not natural, civil, or international law that regulates football. Organizations such as FIFA and the International Football Association Board (IFAB) establish the rules of the game and even have their own court systems.[497] Now let us assume that football was such a dangerous sport that people died on the pitch every other week. It would not be long before the government stepped in. The conclusion is that FIFA can regulate the global interaction of large groups of people without involving the government, so long as the public interest is not harmed in its oversight.

495 "*Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886),*" (WIPO), accessed on Feb 26, 2024, https://www.wipo.int/treaties/en/ip/berne/summary_berne.html

496 Author: various examples are provided on this page: https://opensource.org/licenses

497 *"Court of Arbitration for Sport,"* (FIFA), accessed March 20, 2025, https://inside.fifa.com/legal/court-of-arbitration-for-sport: *"According to article 56 of the FIFA Statutes, FIFA recognises the independent Court of Arbitration for Sport (CAS) with headquarters in Lausanne (Switzerland) to resolve disputes between FIFA, member associations, confederations, leagues, clubs, players, officials, intermediaries and licensed match agents."*

How do these organizations wield authority over such a large group of people? The answer is simple: consent. Football clubs and national football organizations consent to be subjected to the regulations of large football organizations. Individual players and athletes sign contracts that subject them to a code of conduct and a specific arbitration court in case of a dispute. Moreover, other indirect ways demonstrate how such an organization can influence law: governments consist of people who do not live in a vacuum. The first place a civil servant would look to if asked to regulate football would be the existing rules and regulations of organizations like FIFA. After all, why reinvent the wheel?

§ 5.2. Law by Contract

Besides these broad forms of widely followed private standards, a more exclusive form of private law exists: law by private contract. When two or more people of sound mind sign a contract, it binds them to whatever they agreed upon. Contracts hold real power over life—think mortgages, business agreements, or marriage contracts. But contracts do more. Civil law derives from social contract, international law from treaties, and sports law from athlete consent. Agreements form the foundation of legal systems. Could agreement similarly establish blockchain law? How would such agreements function in a decentralized network operating across various jurisdictions?

Essential to contracts are two clauses: the selection of governing laws and the designation of courts for dispute resolution. The parties are free to choose these, and most contracts select a court system and governing law of the country of one of the parties. But what if something goes wrong? Suing a contracting party in a traditional court system can be problematic; it is often a lengthy process, and language, lack of knowledge, or neutrality may be an issue. A ruling in one country is often not directly enforceable in another due to differences in legal systems.[498] The concept of international arbitration was thus developed to tackle this issue.

Arbitration makes use of a private court system for resolving disputes. Parties engaging in arbitration decide to resolve their disputes outside any traditional judicial system. In most instances, arbitration delivers a final and binding decision, producing an award that is enforceable in national courts. An arbitration agreement

498 Zeynalov, Yuliya , *"The Law on Recognition and Enforcement of Foreign Judgments: Is It Broken and How Do We Fix It?,"* (Berkeley Journal of International Law, Volume 31, Issue 1, 2013), accessed March 20, 2025, https://lawcat.berkeley.edu/record/1125622?ln=en&v=pdf, page 152. *"...this study concludes that the absence of an international enforceability regime for foreign judgments leaves a void in the realm of private International Law that sits in stark contrast to the well-established mechanism for enforcing foreign arbitral awards."*

creates a unique body of private law. Those involved consent to be subjected to this body of law by signing the agreement. They can choose those who adjudicate the dispute, and they can even choose their own governing laws.[499]

Thanks to the New York Convention (1958), arbitration awards are enforceable in almost any country in the world. During the convention, it was agreed that arbitration cases decided in the correct form in one of the contracting states are directly enforceable in other states without the need for a local court case.[500] In 2024, 172 states are part of the New York Convention.[501]

Within this framework of international arbitration, contracting parties possess complete freedom to shape their own private legal systems. When necessary, governments of member states can enforce these rulings. This real-world enforcement of 'private law by agreement' presents opportunities for decentralized blockchain projects, potentially allowing international arbitration to serve as the foundation for Decentralized Law.

§ 5.3. Private Law: Limitations and Opportunities

Private law permits substantial freedom of creation. However, there is one catch: private contracts cannot 'breach' higher forms of law. In general, one cannot sign a contract on matters restricted by the laws of the country where one operates. For example: a contract governing the sale of a house in exchange for a suitcase of narcotics is not valid or unenforceable in countries where such narcotics are illegal. Similarly, a decentralized network cannot be used for activities prohibited by the criminal code (like hiring an assassin).

What can be governed by private law is limited to areas that are not regulated or governed by civil or international law. This serves as a reminder for popular crypto projects aiming at creating states or legal entities, raising public funding through initial coin offerings (ICOs), and providing regulated financial services. Still, many crypto projects operate in these areas, some with large funding and many followers.

499 Moses (2017), Selection of characteristics from Chapter 1

500 *"Convention on the Recognition and Enforcement of Foreign Arbitral Awards,"* (United Nations, New York, 1958), accessed April 6, 2018, https://treaties.un.org/doc/Treaties/1959/06/19590607%2009-35%20PM/Ch_XXII_01p.pdf

501 *"Contracting States - List of Contracting States,"* (New York Arbitration Convention), accessed on May 22, 2024, http://www.newyorkconvention.org/list+of+contracting+states, [Author: the number was 161 when I started writing this book; legal globalization moves forward regardless of politics and everyday turmoil].

Crypto projects often fail to fully comprehend the constraints imposed on them by existing legal frameworks. Likewise, they overlook the many legal opportunities!

Numerous areas of cooperation remain open to be explored: international trade, cross-border freelance work, commerce, private association, and almost everything related to smart contracts, decentralized autonomous organizations (DAOs), and peer-to-peer cryptocurrency transactions. Private law systems are voluntary, meaning only applicable to those who consent to them. This offers a fairer path forward than the current one-size-fits-all system of regulatory standards of centralized institutions. The remainder of this book examines the possibilities of this private ordering across decentralized networks and its requirements in detail.

§ 5.4. Summary and Interpretation

Private law deals with relationships between individuals. It governs aspects of interactions that are of no direct concern to the state.

Key Takeaways:

- Private law sometimes refers to aspects of civil law regulating private interactions, such as laws on the qualification of when a will is valid.
- In this book, private law refers to law created by individuals to govern their private affairs.
- Private law operates in many areas, including international trade, family affairs, sports associations, and blockchain projects.
- Lex Mercatoria, a governance system for international trade, Creative Commons copyright licenses, and international sports organizations such as FIFA provide examples of private law arrangements.
- Contracts create a form of exclusive private law, binding individuals to agreed-upon terms.
- International arbitration allows parties to resolve disputes outside traditional judicial systems, with awards enforceable globally under the New York Convention.
- Private laws cannot ‘breach’ higher law or govern areas restricted by civil or international law.

Relying on civil laws does not make sense when one works with a system that by its nature is not restricted to borders. International law is too abstract a level to regulate private projects. As such, private law appears to be the only suitable

tool to regulate crypto projects and to facilitate a fair distribution of rights and duties across decentralized networks. Future chapters in this book explore this idea further.

VI

Summary and Interpretation Section I, The Four Sources of Law

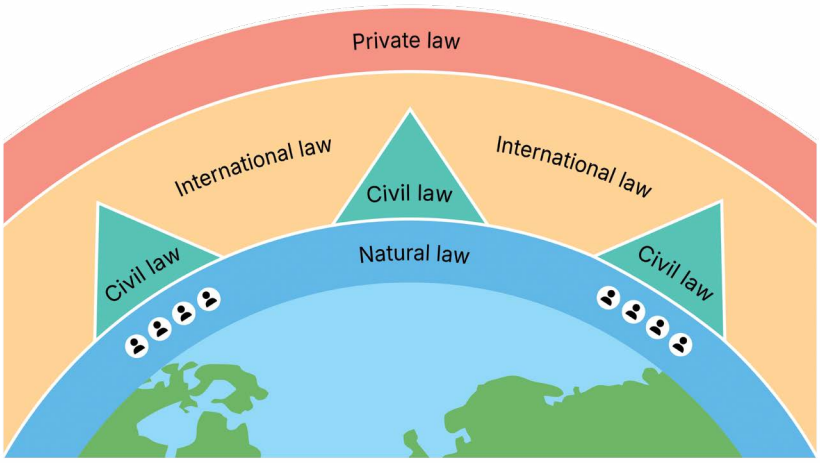
> *"Even after human rights and freedoms have become part of the positive fundamental law of mankind, the ideas of natural law and natural rights which underlie them will constitute that higher law which must forever remain the ultimate standard of fitness of all positive law, whether national or international."*
>
> ~Max Huber (former President of the Permanent Court of International Justice)

Having looked in detail at the legal system's history, we can conclude where to go next on our journey to a more decentralized interpretation of the law. First, we examine how the legal system evolved. Second, we discuss the consequences of these changes. Third, we explore the prerequisites for realizing Decentralized Law.

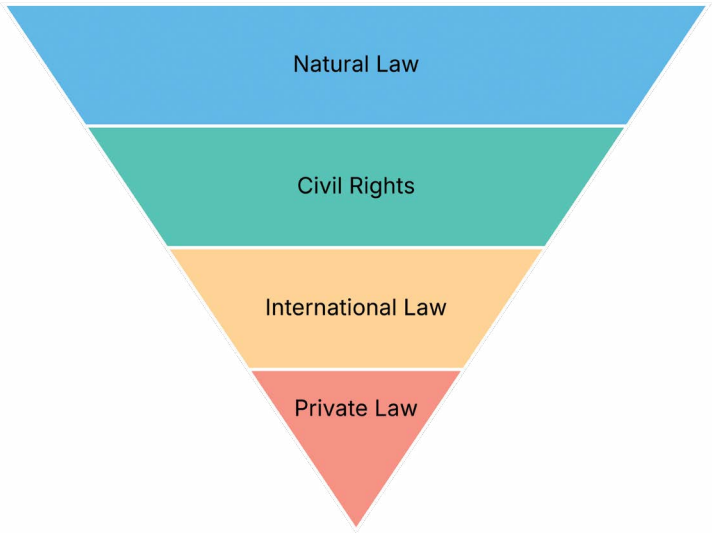
§ 6.1. Evolving Legal System

In the chapter on natural law, we discovered that for most of legal history, natural law served as the undisputed foundation of the legal system. It was based on Justinian's Institutes, which defined a hierarchical legal order. Natural law represented universal and immutable principles observed by all peoples. Civil law built upon this foundation through the specific statutes and customs created by individual nations for their own governance. International law concerned the interactions between different nations and their civil legal systems (which it was derived from). Individuals, enjoying liberty to act, were able to associate freely as long as they respected the civil and international laws, and the natural rights of

others. This interaction is what is named private law in this book. The following image showcases this arrangement:



The hierarchy of laws from this system can simply be deduced by flipping the framework: the foundational layer of natural law becomes the most important, top layer, followed by the civil laws, international laws, and then the private laws. The following image follows this arrangement:

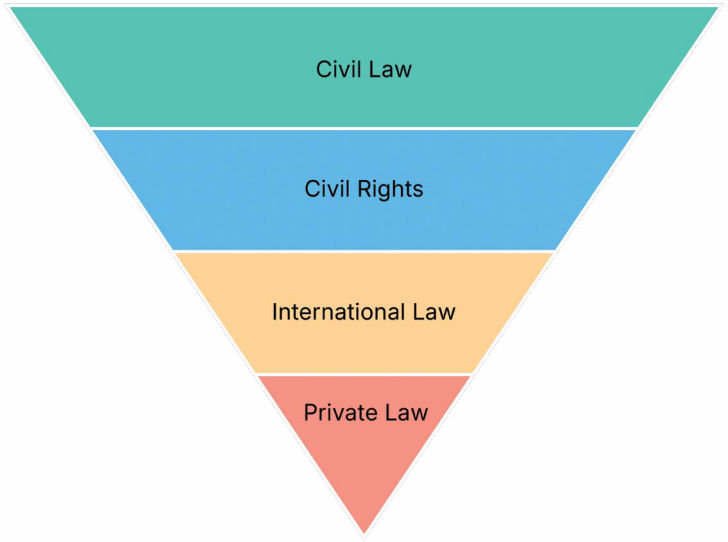


From this hierarchical order, we draw various conclusions. First, the highest authority belongs to nature. We saw that natural law does not have to be a religious concept. Regardless of metaphysical beliefs, human nature emerged from something, and natural law addresses the regulation of human life based on this inherent nature (not to provide definitive answers on the nature of existence). Central to this philosophy is the understanding that an order has been instilled by higher universal or moral laws. Natural law represents both acceptance of and alignment with this order.

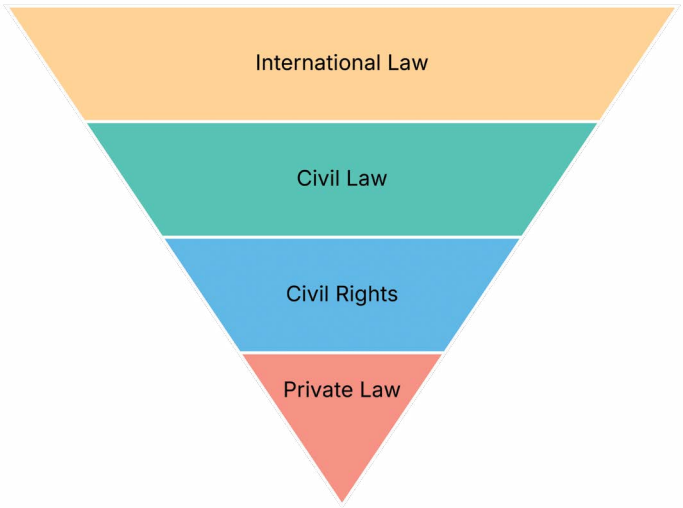
Equal human beings establish civil society through a social contract. These equal civil societies establish international law through treaties. Hierarchically, international law 'sits' below civil law. Empowered by natural law, civil and international law formed a set of governing laws under which private citizens were able to operate.

To summarize this structure, nature created humans, humans created states, and states created international laws—collectively forming the governing laws. Individual contracts serve as voluntary laws (subject to governing laws).

This ideal lasted until the end of the eighteenth century. At that time the legal positivists abolished all references to higher or universal laws. This changed the hierarchy of the four sources of law. States became the ultimate sovereign, responsible for establishing both international law and ensuring civil, instead of natural rights. Law transformed from a division of rights and duties of equals toward a tool for policy-setting by the all-powerful Westphalian states. A wide variety of 'isms' on how to obtain optimal utility shortly followed the development of the civil law state. This legal order can be structured as follows:



This order lasted until WWII, when it became apparent that IOs are needed to prevent disputes between states. Since then, another major legal revolution has been unfolding. Through an increasingly cemented layer of treaties, international law and IOs have established themselves as a governance layer above the nation-state. Examples of treaties that now determine rights and duties are the Paris Climate Agreement and the International Health Regulations. Treaty-based organizations such as the EU have taken control over the continent of Europe, and the UN is trying to establish itself as a global executive to achieve its Sustainable Development Goals. IOs set the standards in the most crucial industries, among them international finance and blockchain technology. The international legal order is increasingly looking like this:



The further this process continues, the more it constrains state sovereignty and individual liberty. Such changes erode democratic representation along with the checks and balances essential to good government. Cryptocurrencies are heavily regulated at this layer of law-making, meaning that the standards being imposed on this industry *already* suffer from a democratic deficit. Dangling underneath the order we find private law, the layer in which all crypto projects operate. Without addressing the issue of governing layers, the crypto industry might one day only be permitted to use this technology through intermediaries regulated by international law.

§ 6.2. A Tilted Legal System

> *"We cannot commend our society to others by departing from the fundamental standards which make it worthy of commendation."*
> ~Thomas Henry Bingham

Clearly, the current legal structure harbors a couple of imbalances that, if left unchecked, pose significant hurdles to the future use of decentralized technologies. There are three overarching, related issues with the current legal system. They recur across all states, though expressed differently and varied in intensity. These are positive law fundamentalism, international law subversion, and the lack of cross-border frameworks for law empowerment.

1. Positivist Fundamentalism

Legal positivists aimed to introduce a more realistic and rational approach to law and law-making. This move came, however, with downsides. Removing the question of

right and wrong—what law ought to be—from the legal system turned law-making into a technocratic and bureaucratic endeavor, exchanging 'equal liberty before the law' with 'ruling according to objectives.'

The end claim of utilitarianism is the greatest good for the greatest number of people. The logical outcome is that 'someone' gets to decide what is best for the rest. The offices where law is made are now populated with types who see the legal system as a means of bringing their utopias into the world—which often aligns with what they (or their donors) want. Their ideas subject human dignity and free will to large visions of great resets,[502] centralized control to save the planet, and delusions that the world's problems can be solved by writing reports in pastel shades. Such an approach to law-making cannot but lead to never-ending controversy.

One of the main arguments of the positivists is that law is nothing but a reflection of relations between the state and its subjects—a relationship of power. But this would mean we are back to the days of empire, where individual rights exist only if granted, and there is no real equality before the law. Frankly, this is not how our legal system was intended, nor how it was formalized, and not how most citizens want it. This mindset of actors at the international level provides ample reasons for concern. As if a system where a few can dictate to the many what the law is were a novel idea never tried before.

> *"The global empire being forged before our eyes is not governed by any particular state or ethnic group. Much like the Late Roman Empire, it is ruled by a multi-ethnic elite, and is held together by a common culture and common interests. Throughout the world, more and more entrepreneurs, engineers, experts, scholars, lawyers and managers are called to join the empire. They must ponder whether to answer the imperial call or to remain loyal to their state and their people. More and more choose the empire."*
>
> ~Yuval Harari (World Economic Forum)

By removing 'primitive superstitions' from the legal system and refusing the dictates of basic humanity, a system is now forming that is deeply anti-human, surprisingly irrational, and causes far more chaos in people's lives than it alleviates. More balance is required between the natural liberty of citizens and the objectives of a self-appointed elite. A legal system's foundation should remain most of all a division of rights and duties of equals.

502 Schwab, Klaus, Malleret, Thierry, *"COVID-19: The Great Reset,"* (World Economic Forum, 2020), page 1: *"A new world will emerge, the contours of which are for us to both imagine and to draw."*

The central claim behind natural law is that there is an order—a moral constant—to human existence. All human beings, equal at a metaphysical level, should obtain a level playing field of equal liberty to figure out for themselves their contribution to the greatest good. The positivists cannot see anything other than a world where all is centrally controlled and where laws are dictated by experts (like themselves). For those who like to see decentralized technologies flourish, this mindset is a problem. Centrally imposed (international) law, as currently written, is incompatible with peer-to-peer finance.

Natural law fits better with a system that is formed in a decentralized way without a central authority. If we want to live in a world with equality before the law, both for individuals and for nation-states, then we must move away from the idea that law can only be passed by an authority. We need a foundation of liberty where human beings, as well as societies, can figure out their ways of living.

2. International Law Subversion

The second imbalance in our legal system comes from the increasingly heavy burden of international law. A large and increasing number of treaties and regulatory standards diminish basic rights of self-determination. Supranational institutions, blinded by ambition, use this framework to set global standards on almost every topic imaginable. It is becoming a new, hierarchically superior governing layer. The problem with this system is that it is undemocratic and hard to reverse. It operates outside of democratic oversight and above the separated power structures. The people active in this space are not elected or accountable. There are no courts where citizens can go for recourse. Regulation at this level falls outside basic civil legal checks and balances and assigns unequal rights and duties.

The direction this system is moving leads to errors of legitimacy. It does this in three ways. First, democratic government presupposes that all rights reside with the people, who only delegate these rights to the state for their mutual benefit. This is usually arranged in a constitution in which there are set limitations as to what can and cannot be done. The state (and IOs) cannot then turn around and pass laws exceeding the authorities delegated to them.

Classical international law theory presupposed that all states—derived from equal human beings—are themselves considered equal parties in the law of nations. This leads us to the second problem of modern international law: the Western world seems obsessed with using it to establish a ‘rules-based order,’ which in practice promotes its own way of living. By doing so, the Western world uprooted the balanced legal order it endorsed around the world. By imposing constantly changing visions of what is and is not rules-based, increasingly every person, corporation, and state

is seen as a means to effectuate policy. Obviously, international law has problems with limiting itself to both the natural order and the legal restrictions it imposes on itself. Local interests and national authorities are often overruled or ignored—a fact that has not gone unnoticed in the rest of the world. Simply said, a discrepancy exists between theory and practice.

The idea of states operating under equal conditions was readily accepted around the world. The idea that a small group of self-proclaimed elites should micromanage the optimal public good based on arbitrary interpretations of reality and scientific models—which prove nothing but the delusions of grandeur of their creators—is a harder sell.

International law remains an abstract and technocratic realm of which the regular man has no understanding and where he holds no power. This leads to the third error of legitimacy: the democratic deficit. Elections hardly influence the creation of international standards. Yet, more and more authority is delegated to these international layers. The observers of national politics seem unaware of the large-scale coordination going on behind the scenes at this level of law-making. They are, however, not blind to the consequences.

These issues compound when combining international law with the tunnel vision of legal positivists. This combination condones the gravest violations of law and human decency so long as correct procedures are followed or if the global objective outweighs state or individual rights. Modern society uses international law in many areas that the early philosophers could never have foreseen. In the same way that the common law system of bottom-up justice in front of a jury of one's peers was replaced with a barrage of statutes, civil law sovereignty is now trampled by international standards. If we want to live in a world with equality before the law, both for individuals and for states, then we must curb the explosion of international law: limit what areas can be regulated by it, limit its authority over states, and especially limit its influence over individuals and their networks of interaction.

3. Lack of Cross-Border Empowerment

One other conclusion can be drawn: there are currently no real frameworks for cross-jurisdictional cooperation in support of the crypto community. Natural law means little without enactment. Civil law regulates a single society and thus cannot regulate decentralized networks. International law limits itself mostly to areas of diplomatic interest. As a result, treaties are slow to develop and hard to formalize. Moreover, international law instruments lack detail and are unable to adjust to real-world dynamics and rapidly developing technologies. It can never guide the specifics of specific smart contracts.

It does not help that the regulators in the international sphere seem to be unable to reconcile themselves with the idea of a peer-to-peer economy. Their focus is on law enforcement and staying relevant, and they can only truly regulate financial intermediaries. As such, they do little for the facilitation of private cross-border technology and to empower crypto users. In fact, on the contrary, they aim to restrict their use by forcing them into the existing intermediated system.

There is a need for a fundamental rethink of the laws governing blockchain technology. The remainder of this book focuses on that. Section II explores the legality of the various blockchain technologies. After collecting these final puzzle pieces, Section III weaves it together into a pioneering legal system that empowers blockchain technology instead of restricting it.

> *"We can easily forgive a child that is afraid of the dark, the tragedy of life is when men are afraid of the light."*
> ~Plato

SECTION II

Blockchain Law

VII

Decentralized Technologies and the Law

> *"Nothing is more powerful than an idea whose time has come."*
> ~Victor Hugo

When Satoshi Nakamoto released version 0.1 of the Bitcoin software and launched the network on January 3, 2009, by mining the first genesis block of the blockchain, few could have foreseen that it would revolutionize the idea of money in such a short time. Yet, it did. As rumors circulated across the Internet, the decentralized network started to grow. The rest is history. Bitcoin emerged as the first digital currency to enable low-cost global payments without intermediaries. The success of Bitcoin led to the development of numerous alternative blockchain networks. Innovation continued, applying these technologies in other areas—from smart contracts and digital tokens to innovations in governance and societal organization. Bitcoin itself evolved into a mature asset class, now attracting investments from major financial firms and national treasuries.

These developments often collided with existing legal frameworks. Debates on how decentralized technologies in general, and cryptocurrencies in particular, relate to the law have been ongoing since their inception. This chapter addresses this issue in detail. But before we explore the legality of blockchain technologies, it helps to have their core features explained.

§ 7.1. The Power of Bitcoin

> *"Until now, no scarce commodity that can be traded over a communications channel without a trusted third party has been available...now that is possible."*
>
> ~Satohshi Nakamoto

Traditional digital currencies are sent from one account with a financial institution to another. Bitcoin operates differently. It eliminates the need for third parties. Bitcoins are recorded on a decentralized ledger called the blockchain. Users can spend Bitcoin recorded on this ledger using their unique access keys. A Bitcoin transaction involves transferring the ability to spend these Bitcoins to another person.[503] Whoever holds at any moment the keys to a certain amount of Bitcoin fully controls how this Bitcoin is spent. This ability can be transferred to anyone worldwide through free software applications. Nobody can stop the transactions or reverse them; the Bitcoin network yields full control to its key holders.

The Bitcoin network and the transactions on it are recorded on a distributed ledger. Distributed means that transactions are stored on many computers around the world instead of a centralized server. A network of automated programs on these distributed computers maintains the blockchain and processes transactions. As explained by Greek-English cryptocurrency expert Andreas Antonopoulos, no single person or group can tamper with the Bitcoin ledger. Bitcoin maintains one central ledger that is forced in sync and stored on computers around the world. All network participants together maintain consensus of the central ledger. Consensus emerges from the interplay of four processes that occur independently on nodes across the network: verification of each transaction by every full node, aggregation of those transactions into new blocks by mining nodes, verification of newly mined blocks and assembly into a chain, and independent selection, by every node, of the valid chain of transactions.[504] The reliability of this process is warranted by open-source computer code that can only change if the nodes independently agree. This practice makes the Bitcoin network fully decentralized and 'trustless,' meaning that the value of Bitcoin comes from it being secured without having to trust a central authority.

The traditional financial system requires complex regulations, oversight committees, central bank deposits, government mandates, and fancy papers with watermarks

503 Antonopoulos, Andreas M., *"Mastering Bitcoin - Programming the Open Blockchain,"* (O'Reilly Media, Inc, 2nd Edition, 2017), Chapter 2. How Bitcoin Works.

504 Antonopoulos (2017), Chapter 10, Mining and Consensus, Decentralized Consensus

and autographs on them. In contrast, Bitcoin is secured by open-source code, math, and unbreakable cryptography. The execution of a Bitcoin payment happens based on a script. As described by Antonopoulos,

"Bitcoin transaction validation is not based on a static pattern, but instead is achieved through the execution of a scripting language. This language allows for a nearly infinite variety of conditions to be expressed. This is how bitcoin gets the power of '***programmable money***.'"[505]

Besides spending money, there can be conditions applied to how and when it is spent. For example, the currency could be spent after certain predetermined conditions are met. As a result, Bitcoin can function as a foundational layer for other more complex payment functions built on top, which is similar to how the Internet was built first, and email and social media were added later.

The Bitcoin network has handled up to 670,000 transactions a day.[506] At first glance, this limits its use as a global payment system. Visa, for example, processes 660 million transactions a day.[507] But Bitcoin scales with technologies built on top of it. One, called the lightning network, already exists. Despite it still being in development, it facilitates instant global payments at negligible fees through a simple phone app. The lightning network has the technological potential to facilitate over one million transactions a minute,[508] making it an order of magnitude faster than Visa and Mastercard combined.

Bitcoin offers a payment system with instant settlement that is cheaper to use, easier to access, globally available, more secure, and uncensorable and for which hardly any additional infrastructure is needed. However, using the system currently requires serious precautions to avoid costly mistakes. Given that payments are digital, instant, and irreversible, even a small mistake can result in a loss of funds. Users have had their access keys stolen by clever social engineering tactics or

505 Antonopoulos (2017): Chapter 6, Transactions.

506 "*Number of daily transactions on the blockchain of Bitcoin from January 2009 to January 17, 2024,*" (Statista), https://www.statista.com/statistics/730806/daily-number-of-bitcoin-transactions/, accessed on Feb 29, 2024, [Author: the graph caption states 670.000 daily transactions, and the article says that the network processed 670.000 coins. This is a mistake, since most transactions are made for fractions of Bitcoins (or multiple Satoshis, depending on your preferences)].

507 "*Number of purchase transactions on global general purpose card brands American Express, Diners/Discover, JCB, Mastercard, UnionPay and Visa from 2014 to 2022,*" (Statista), accessed on May 13, 2024, https://www.statista.com/statistics/261327/number-of-per-card-credit-card-transactions-worldwide-by-brand-as-of-2011/.

508 "*The State of the Lightning Network Behind the Curtains,*" (Bitcoin Magazine, Oct 5, 2021), accessed on July 30, 2024, https://bitcoinmagazine.com/markets/the-state-of-lightning-network-bitcoin-adoption.

have lost their funds by sending payments to the wrong address. One common mistake is that people lose their access keys altogether. Some viruses actively look for Bitcoin wallets and seed phrases or sneakily change destination addresses in your payment app. Work on these usability issues is ongoing.

The potential elimination of intermediaries could threaten the existence of banks and other financial institutions, as well as the ability for governments to oversee and regulate payments. Existing financial regulations almost exclusively rely on the gatekeeper function of licensed financial service providers. These do not exist in the wider crypto economy. Even though payments on a public blockchain can and are being monitored, they cannot be blocked, nor can accounts be frozen. No one can be excluded from the network because access depends on technology, not on identity.

The fixed supply of Bitcoin starkly contrasts to the ballooning balance sheets of central banks and the wider financial system. Hard money, like Bitcoin and gold, challenges the existence of money printing, the entire industry built around it, and the mass of people and industries dependent on it. A Bitcoin standard would make massive leverage through fractional reserve banking less likely. And nobody would loan out Bitcoin at a zero percent interest rate. It would place limits on the amount governments can spend and borrow. In the 24/7 crypto economy, rumors spread like wildfire. 'Exchange runs,' with people withdrawing their funds out of financial institutions, happen within days if not hours. Maintaining a fractional reserve system or providing treasury functions becomes challenging under these conditions. The peer-to-peer nature of Bitcoin makes it a poor fit for the centralized financial system. Which is more likely to thrive?

Bitcoin introduced hard math and logic and placed them next to the fluid concepts underpinning the modern fiat currencies used in our everyday transactions. This changes everything. Careers have been made, laws passed, conventions held, and wars fought over the nature of the monetary system. Countless master's and PhD theses have researched optimal interest rate policies and models on monetary theories, regulations, and policies. And then Bitcoin came along and offered a neutral and debt-free alternative that treats all people equally without fear or favor.

Besides being a superior form of money, its governance model is also superior to that of the existing financial system. In a sense, Bitcoin resembles a perfect republic. No single person or group can control Bitcoin's direction. Participants do not vote, but they reward those who secure the network. The most honest and hard-working developers and most efficient miners receive these rewards. Where consensus is needed, it is achieved not through a mob but through 'representatives.' No majority can enforce its will, but nothing can be enforced without a majority. This separation

of power among the participants is ensured by unbreakable code. One can only participate by playing by the rules and benefiting the network. Bitcoin is a globally decentralized republic of money. It takes the power of money creation out of the hands of a small group and places it in the hands of the people. It removes the influence of individual states and their ability to weaponize financial systems and replaces it with politically neutral money. If Bitcoin continues to grow and develop and eventually stabilizes in price, it could become a far more reliable foundation for a monetary system than any credit-based central bank system. Indeed, these two systems are not even remotely in the same category.

Not everybody can imagine Bitcoin being money. But how many people from the nineteenth century could have foreseen that their money would go from gold to claims on gold, then to floating abstractions no longer attached to the value of gold, and then to digital claims on private institutions with a fractional reserve?[509] What has been used as money has changed considerably over time. Legal tender laws, despite common misconceptions, do not establish the definition of money. As explained by the Bank of England, legal tender has a narrow technical meaning which has no use in everyday life. It merely means that if you offer to fully pay off a debt to someone in legal tender, they cannot sue you for failing to repay. Other than that, anyone can choose what payment they wish to accept (or refuse), ranging from cash to Pokémon cards.[510] The reason is simple. As explained by economist Ludwig von Mises (1881–1973), when both parties to an exchange fulfill their obligations immediately, there is no motive for the judicial intervention of the state. But when the exchange is one of present payment against future goods, one party may fail to fulfill his obligations although the other has carried out his share of the contract. Then the judiciary may be invoked.[511] Regardless, even then the state must tread carefully. If the law mandates money that the market disfavors, it would not result in the fulfillment of obligations but in their complete or partial cancellation.[512] Moreover, bestowing the property of legal tender on a thing does not suffice to make it money in the economic sense. Goods can become common media of exchange only through the practice of those who take part in commercial

509 Federal Reserve Bank of Chicago, "*Modern Money Mechanics, A Workbook on Bank Reserves and Deposit Expansion,*" (Public Information Center, Federal Reserve Bank of Chicago, February 1994), page 2

510 "*What is legal tender?,*" (Bank of England, updated on 30 January 2020), accessed on August 25, 2024, https://www.bankofengland.co.uk/explainers/what-is-legal-tender

511 Mises, Ludwig von, "*The Theory of Money and Credit,*" (The Foundation for Economic Education, Inc., Irvington-on-Hudson, Translated from the German by H. E. Batson, New York, 1971), page 69.

512 Ibid., page 71.

transactions. It is the valuations of these persons alone that determine the exchange ratios of the market.[513]

To summarize, it is the will of the people that determines what is accepted as money, and it is their subjective preferences in the open market that determine its price. Bitcoin has proven to be valuable as money exactly because all it can be used for is to be exchanged in the future. Until that time, it preserves the purchasing power of the holder without relying on law, issuing institutions, and being 'backed' by something or someone. The latter, from the perspective of Bitcoin holders, do nothing but introduce unnecessary risk. It is the only asset class that not only removes third-party risk but also allows the holder to transfer jurisdictional risk to a neutral planetary storage. Once the person is ready to spend it, they can retrieve their assets and spend them wherever they need in the world. This is made possible by technology and without needing complex legal arrangements. Bitcoin truly is revolutionary in many ways.

Programmable Money

Bitcoin is a system of programmable money, meaning that payments can be executed automatically by computer code and conditions can be applied to transactions. Nevertheless, while Bitcoin is programmable, its script is basic and lacks flexibility. This 'shortcoming' led Vitalik Buterin to develop Ethereum. Ethereum is "a Blockchain with a built-in fully fledged Turing-complete programming language."[514] In theory, transactions on the Ethereum blockchain can be subjected to any type of computation problem.

In the simplest terms, Ethereum combines a general-purpose computer with a decentralized blockchain, thereby creating a distributed world computer.[515] Anyone can run programs on this Ethereum computer using what is called a virtual machine. A virtual machine is a tiny virtual computer executing code in a safe environment. The virtual machine runs simultaneously on multiple computers around the world yet produces a central state that is secured by the rules of consensus. Mirroring Bitcoin, transactions on Ethereum are final and irreversible.

For this computing to take place, the system makes use of nodes that each must validate *every* transaction and run any smart contracts it calls. To facilitate the use of these resources and limit programs from flooding the system, users pay a

513 Ibid., page 70.

514 Buterin, Vitalik, *"A Next-Generation Smart Contract and Decentralized Application Platform,"* (2013), accessed April 4, 2018, https://github.com/ethereum/wiki/wiki/White-Paper

515 Antonopoulos, Andreas M., Wood, Gavin, "*Mastering Ethereum, Building Smart Contracts and Dapps,"* (O'Reilly, Sebastopol, United States, 2019), page 8.

'gas' fee for every computational instruction. Gas is paid for with Ether, the native cryptocurrency of the Ethereum network. Whenever a transaction is made or a smart contract is deployed or used, a gas price for the use of the network is calculated. Ether is sent along with the transaction explicitly earmarked for the purchase of gas.[516]

The flexibility of programming on blockchains resulted in an explosion of additional features added to blockchain technology, many of which do not even have a monetary basis. One popular tool is the decentralized application (Dapp), which is, at the least, a smart contract and a web user interface.[517] A Dapp allows users to interact with blockchains and peer-to-peer infrastructure services through their phones and Internet browsers. This new development in Internet infrastructure, moving away from centrally owned and hosted applications to those built on decentralized protocols, is known as Web3.[518]

Another enhancement of the Ethereum network is the oracle. The term comes from Ancient Greece, where it was thought that oracles communicated information directly from the gods. In the Ethereum ecosystem, oracles are meant to introduce a way of getting real-world information onto the Ethereum platform for smart contracts to use. Examples of such data can be anything, from currency exchange rates and the price of gold to the outcome of sporting or political events, the weather, or events happening on other blockchains.[519] Oracles exist that perform computation or provide storage facilities that are too complex or resource-intensive to perform on-chain.[520]

Buterin envisioned that innovative systems can spend currency not based on human actions but on computer code and real-world input. This allows for systems to be built that make transactions automatically without a central system of servers, approvals, system supervisors, or security systems. There are endless applications for this: self-executing (smart) contracts, token systems used for crowdfunding, arbitration systems, financial contracts, and even new systems of governance.[521]

Development did not stop with the invention of Bitcoin or Ethereum; an explosion of blockchain development has happened since. The number of applications and corresponding ecosystems has massively expanded. The next chapters focus on the technological developments with the most impact, discussing the legality of

516 Antonopoulos & Wood (2019), page 9: Implications of Turing Completeness.
517 Ibid., page 10: From General-Purpose Blockchains to Decentralized Applications (Dapps).
518 Ibid., page 10: The Third Age of the Internet.
519 Ibid., page 254: Oracle Use Cases and Examples.
520 Ibid., page 259: Computation Oracles.
521 Buterin (2013): Applications

these developments in detail. But before we can do so, two crucial issues need to be addressed:[522] the relationship between law and (blockchain) technology and the need for a legal framework.

§ 7.2. Law and Blockchain

With the development and expansion of the technology, blockchain inevitably ran into the domain of law. Given the libertarian nature of those active in the space, the general tendency of the industry was to dismiss those discussing its legality with one-liners such as 'code is law' or 'code is free speech' and the wishful thinking that law did not apply to operations in cyberspace. This mentality was laid bare during the 2017 bull market, which was mostly fueled by the initial coin offering (ICO) craze. With ICOs, founders use smart contracts to issue and sell tokens to fund project development. Real-world applications were going to be 'put' on a blockchain. An array of projects focused on building new types of decentralized legal entities, court systems, land registration, and citizenship. Optimism filled the air. The legality of these ideas was not discussed. Smart contracts and DAOs would replace corporations and institutions, and people would work for computer programs and not the other way around. Some projects even focused on creating decentralized nations, complete with 'embassies' in which people got together to discuss how their social club was going to replace millennia of tradition in international law with lines of code.[523] Everything on Planet Earth would be 'tokenized.' One project aimed to raise funds to tokenize all the world's resources. Difficult questions, such as how they would obtain the title to all the world's resources and who would own them, were not asked.[524]

Not surprisingly, the vast majority of ICO projects did not live up to their promises. It was reminiscent of Dubai after the real estate boom: a desert filled with half-finished and abandoned skyscrapers. Still, various projects did develop into mature and engaging ecosystems. Projects that made outrageous claims that never materialized still ended up using their resources to build useful open-source technologies. And while those from the legal persuasion were still scratching their heads about how

522 Author: for the creation of the original whitepaper and this book dozens of whitepapers were read of projects focusing on arbitration, corporations, jurisdictions and smart contracts.

523 "*Bitnation Pangea Whitepaper,*" (Bitnation - Governance 2.0), accessed on April 4, 2018, https://tse.bitnation.co/ [Author: this was a thing back in 2017 when I wrote my whitepaper, the last I saw of this project was the selling of 'real estate' in the Meta-verse, and the website now hosts a crypto affiliate blog pushing meme-coins].

524 Author: I found this project a few years back promoted in a Telegram group. I was not able to find this project. Obviously, such a project can never work, and perhaps it was a scam to begin with.

these so-called smart contracts could live up to their legal promises, the industry moved full steam ahead, and the technology jump-started entire industries, such as DeFi, and it supported real-world applications, such as supply chain tracking. The technology developed for selling dubious ownership claims over overpriced JPEGs might one day power the world's stock markets. Progress is not linear. As it turns out, no single person or institution can predict the innovations coming from a swarm of programmers. It is a shame that few outside the industry appreciate the astonishing technological and societal breakthroughs invented during the short and chaotic—often manic—history of crypto. A legal system should stimulate and facilitate this process, not restrict it simply because someone at some point failed to provide a utility bill.

Internet Law

Since the early days, users of the Internet embraced it as a tool for liberty. Emulating the early American settlers, early inhabitants of cyberspace were looking for freedom from existing political systems. And just as the American settlers ended up living in a country with rules for everything and more than 1.3 million lawyers,[525] cyberspace did not end up as the free haven it was expected to be. Over the years, the Internet has become highly regulated. Websites and services are blocked if they host illegal content. Sites such as Google and Facebook police and censor their services based on international standards. Governments define what e-commerce platforms can buy or sell. Additionally, countries such as China aim to control the types of information that their citizens can view.[526] Even the EU is taking control over what can and cannot be said and done online with their extensive and invasive Digital Services Act.[527] The Internet is increasingly being turned from the Wild West into a high-security facility.

American legal scholar Lawrence Lessig wrote on the relationship between code, the Internet, and the law as far back as 1999. One of the main mistakes that the early Internet anarchists made was that they treated the Internet as a fictional new place. But you are not going anywhere when you access the Internet; you are still in your room or office.[528] You do not suddenly become excluded from the

525 "*ABA survey finds 1.3M lawyers in the U.S.,*" (American Bar Association, June 20, 2022), accessed on March 4, 2024, https://www.americanbar.org/news/abanews/aba-news-archives/2022/06/aba-lawyers-survey/

526 Filippi, Primavera De, Wright, Aaron, "*Blockchain and the law - the rule of code,*" (Harvard University Press, Cambridge, Massachusetts, 2018), page 50-51: Lex Cryptographica.

527 "*The Digital Services Act, Ensuring a safe and accountable online environment,*" (European Commission), accessed on March 4, 2024, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act_en

528 Lessig, Lawrence, "*Code, and other laws of cyber space,*" (Basic Books, New York, 1999),

law when sitting behind a computer. He observed that the increase in commerce introduced an entrance for regulation, given the need to facilitate payments and protect consumers and the fact that people had to identify themselves and engage in contracts with their clients.[529] He further noticed that at times, various jurisdictions had an incentive to cooperate in regulating Internet behavior, which became obvious in the success of restricting online gambling.[530]

However, the main observation of Lessig was that the infrastructure of the Internet determined the ability to regulate it. He related a story of being in communist Vietnam and observing that people were freer than in America, simply because the government did not have the infrastructure to enforce their laws even if they wanted to.[531] The same logic applies to technology; the way cyberspace is built is directly related to how it can be regulated. As a result, certain aspects of cyberspace are regulated by code,[532] which explains the title of his book: *Code Is Law*.

The next logical conclusion is that to preserve liberty and limit the power of government, certain designs are better than others.[533] Among the design aspects of technologies favorable toward liberty are lack of ownership, the absence of property, and the inability of one or a small group to direct how code will be used.[534] In addition, the power of government over open-source code is constrained.[535] Lessig was right. Cryptocurrencies, with Bitcoin in particular, tick the boxes of being technology governed by code and not by law; the networks are not owned or controlled by a small group of people that can be subjected to regulations, and they are built with open-source code. That is why international regulatory efforts focus on intermediaries and the use of the technology—not the technology or infrastructure itself.[536]

	page 21.
529	Ibid., page 43.
530	Ibid., page 55-56.
531	Ibid., page 189.
532	Ibid., page 20.
533	Ibid., page 20.
534	Ibid., page 7.
535	Ibid., page 107.
536	FATF (2021), page 18: *"The FATF defines peer-to-peer' (P2P) transactions as VA transfers conducted without the use or involvement of a VASP or other obliged entity (e.g., VA transfers between two unhosted wallets whose users are acting on their own behalf). P2P transactions are not explicitly subject to AML/CFT controls under the FATF Standards. This is because the* ***standards generally place obligations on intermediaries,*** *rather than on individuals themselves (with some exceptions, such as requirements related to implementing targeted financial sanctions)."*

Legal Aspects of Blockchain Technology

The first legal issue, as observed by the UN in their report on the legal aspects of blockchain, is the fading of national borders. This technology allows anyone to interact with anyone else, anywhere in the world, so long as they have an Internet connection. As a result, it is not possible to determine which laws apply generally to a blockchain.[537] However, at the level of specific transactions, there can be clarity when a governing law has been chosen, when the contracting parties are in the same country, or when private international law determines what governing laws apply.[538] This can lead to problems of legality for certain types of transactions where the contracting parties do not even communicate with each other, such as atomic swaps.[539] The same problem arises when interacting with a smart contract whose 'owner' is unknown—or one that has no owner. This touches on issues of liability.

The exact definition of liability is a question that must be answered based on applicable law. If a developer provides a smart contract for the world to interact with, but it turns out that it performs an illegal act or poses a security risk to the users, who can they turn to? Even if a smart contract is clearly fraudulent, it still might not be possible to attach the identity of the perpetrator. Another question is whether a smart contract interaction can even result in a breach of contract in the first place. After all, the outcome of a smart contract is fixed and known.[540]

What is poorly understood is that the law simply might not be enforceable even when the smart contract breaks and all authors are known. Smart contracts, after launch, become permanent and decentralized. If blockchains themselves are beyond regulation, so are smart contracts submitted to them. Even in the theoretical example where an entire development team is arrested, the software and chain can simply continue being used and further developed.

537 UNOPS (2018), 3.3.1 Applicable law, page 34: "*The decentralized nature of Blockchain technology means it is not possible to determine which laws apply generally to Blockchain, because every legal area sets the conditions for applicability within its domain. Thus, it is conceivable that Dutch civil law will apply to a Blockchain transaction while the German authorities can levy taxes on the same transaction. In fact, regulations from many different legal systems could apply to a Blockchain, depending on the context.*"

538 UNOPS (2018), 3.3.1 Applicable law, page 34.

539 "*Atomic Swap: Definition and How It Works With Cryptocurrency Trade,*" (Investopedia, Updated July 19, 2024), accessed on Oct 4, 2024, https://www.investopedia.com/terms/a/atomic-swaps.asp

540 UNOPS (2018), 6.3.3 Liability, page 95.

§ 7.3. Property Rights

> *"It is not because men have made laws, that personality, liberty, and property exist. On the contrary, it is because personality, liberty, and property exist beforehand, that men make laws."*
> ~Frédéric Bastiat

According to the influential German legal philosopher Georg Wilhelm Friedrich Hegel (1770–1831), a person[541] must be able to translate his free will into the external sphere to exist as an idea.[542] A person has as his substantive end the right of putting his will into any and every 'thing' and thereby making it his. After all, a thing has no such end in and of itself and derives its destiny and soul from the person's will.[543] A single will becomes objective in property; property acquires thus the character of private property.[544] And thus, without private property, there can be no expression of free will in the objective public realm.

Holland explained that proprietary rights are extensions of the power of a person over portions of the physical world. The air, the sea, and the water of rivers have been said to be for the common use of all men but to belong to none. Most things, on the other hand, are capable of subjection to the human will, and in them, proprietary rights may be acquired which vary in extent from absolute ownership to a narrowly limited power of the user. The essence of such rights lies not in the enjoyment of the thing, but in *the legal power of excluding others* from interfering with the enjoyment of it. In an advanced state of society, a man is secured in the exclusive enjoyment of an object to an extent far beyond what he can assert for himself by his own force.[545] Society advances greatly when possessions turn into property protected by law. It advances even further when man obtains control over the right of an object irrespective of having actual, or even constructive, control over it: the latter being known as ownership.[546] Specific ownership rights include

541 Author: 'person' here means a flesh and blood human being. However, the same should logically apply to legal persons discussed later in this book; they also are able to express their will through resolutions and actions of their agents.

542 Hegel, G.W.F., "*Hegel's Philosophy of Right, 1820,*" (Oxford University Press, First published by Clarendon Press 1952, translated with notes by T M Knox 1942), First Part: Abstract Right; I Property: § 41.

543 Ibid., First Part: Abstract Right; I Property: § 44.

544 Ibid., First Part: Abstract Right; I Property: § 46.

545 Holland (1916), Chapter XI – Rights 'in rem', page 193, [Author: combination of various quotes].

546 Ibid., Chapter XI – Rights 'in rem', page 208, [Author: edited for readability].

the right to possess, the right of enjoyment of the thing and its fruits, and the right of disposition, alteration, destruction, and alienation.[547]

Salmond explained that ownership in its most comprehensive signification denotes the relation between a person and any right that is vested in him. Every right is owned, and nothing can be owned except a right. Every man is the owner of the rights which are his. When, as is often the case, we speak of the ownership of a material object, this is merely a convenient figure of speech. To own a piece of land means in truth to own a particular kind of right in the land, for example, the fee simple of it.[548] Moreover, the right of the owner of a thing may be all but eaten up by the dominant rights of lessees, mortgagees, and other encumbrances. In such cases, ownership may be reduced to a mere name rather than a reality.[549]

We often speak, Salmond continued, of owning, acquiring, or transferring, not rights in land or chattels, but the land or chattels *themselves*. In doing so, we mix the right with the material thing which is its object. This concrete reference to the material object relieves us from the strain of abstract thought. Rights are dim abstractions, and material things are easier to think and speak of as visible realities. This figurative identification of a right with its object is, however, not always permissible. Yes, I may be said to own the money in my hand. Yet, regarding what is owed to me, I own not the money itself, but a right to it—for example, an immaterial debt.[550]

Hegel argued that when private property is accepted as an expression of the will of the individual, what is needed is a way to relate to the will of others. The realm of contract provides this mediation, where property not merely functions as a relation of a thing and my subjective will, but also to that of another person's will and that of participation in the common will.[551] Property rights, thus Hayek concluded, determine "the boundaries of individual private spheres in the material world, and ways of voluntarily changing these boundaries."[552] To summarize, mediation of private property is the sphere of contract and exchange, and the ability to engage in them is an integral part of property rights.

547 Ibid., Chapter XI – Rights 'in rem', page 210.

548 Salmond (1913), § 86. The Definition of Ownership, page 220, [Author: combined quotes and edited for readability], [Author: fee simple is a form of land ownership that grants the owner complete and total control of the property].

549 Ibid., § 87. Corporeal and Incorporeal Ownership, page 223, [Author: combined quotes and edited for readability].

550 Ibid., § 87. Corporeal and Incorporeal Ownership, page 222, [Author: combined quotes and edited for readability].

551 Hegel (1820), First Part: Abstract Right, I Property, Transition from Property to Contract, § 71 [Author: edited for readability].

552 Miller (2010), page 129.

Blockchain-Based Property Rights

With Bitcoin, something unique emerged. Was it a new form of money? Was it an asset class like gold? Was it a security? The opinions were, and still are, divided. The problems resulting from an asset without clear corresponding rights and duties can be illustrated by the drama that unfolded with the early Bitcoin exchange Mt. Gox in Japan, which operated from 2010 to 2014. On this makeshift exchange, at one point 70 percent of all Bitcoin trading took place. The system was unstable and lacked proper security measures, making it a disaster waiting to happen. In early February 2014, the exchange suspended withdrawals after claiming to have found suspicious activity in its digital wallets. The company discovered that it had 'lost' hundreds of thousands of Bitcoins.[553] The Japanese government intervened, but the ensuing bankruptcy proceedings was where the legal trouble started. At that time, there was no legal qualification in Japan for what Bitcoin was. The Tokyo District Court dismissed a claim from one of the former customers by denying that Bitcoin units could be an object of ownership. It argued that Bitcoins are intangible, and Japanese law restricts ownership rights to tangibles.[554] How can one claim to assert a right to an asset when that right does not exist in law? As of 2024, the proceedings are still ongoing.

The rights and duties attributable to technological innovations vary based on context and existing legal frameworks. It was not long before various governments provided guidance as to the duties relating to cryptocurrencies. For example, the U.S. Internal Revenue Service (IRS) in 2014 declared cryptocurrencies property from a tax perspective.[555] Still, assigning property rights and duties has not gone as smoothly. A cynic might say that the government looks after itself first and the rights of the citizens second, but this is too easy. It makes sense for tax laws to readily apply to novel technologies, because otherwise there would be a 'new' technology

553 "*What Was Mt. Gox? Definition, History, Collapse, and Future*" (Investopedia, updated May 30, 2023), accessed on March 3, 2024, https://www.investopedia.com/terms/m/mt-gox.asp, [Author: this article, and its data, was updated since earlier versions I cited].

554 Takahashi, Koji, "*Implications of the Blockchain Technology for the UNCITRAL Works,*" (United Nations Commission on International Trade Law, Vienna, 4-6 July 2017, Volume 4: Paper presented at the Congress), page 88-89: "*Where an ownership-based vindicatio claim is made to seek the restitution of blockchain-based tokens, the first issue which must be addressed is whether such tokens qualify to be an object of ownership. Thus, in the Mt.Gox case outlined above, the Tokyo District Court dismissed the claim by denying that bitcoin units could be an object of ownership. The court's reasoning rested on a formal analysis as it relied on the Japanese law concept of "shoyûken," a concept which signifies ownership but is statutorily limited to tangibles as its objects. Some legal systems, like Japanese law, restrict the object of ownership to tangibles while others extend it to intangibles.*"

555 IRS, "*Notice 2014-21,*" (Internal Revenue Service, March 25, 2014), https://www.irs.gov/pub/irs-drop/n-14-21.pdf

every week. It must be noted that in the early days of Bitcoin, few were convinced it would succeed. It makes no sense to change property laws for every hype. Slowly but surely, the world has come to recognize cryptocurrencies as a new digital asset class, and the courts now recognize them as well. Regarding digital asset property rights in the UK, the UK Law Commission concluded that despite their poor fit within traditional property categories, they can still attract personal property rights, and this is clearly the position of common law.[556]

Regulators' reluctance to grant Bitcoin official status can be attributed to two unique characteristics. Lessig already observed that open-source code effectively places a check on the top-down power of government while enabling an extremely effective scope for bottom-up control.[557] Bitcoin happens to be built with open-source code. The result is that there is not one group of people who can be held responsible for what happens with the Bitcoin technology, as, for example, would be the case with a payment system set up by a bank. Secondly, the Bitcoin network operates in such a way that no one person has control over the network. With a stroke of genius, and after earlier failed attempts, the system was designed in a way that the incentives of each participant are aligned with a common interest in the functioning of the network. One can provide work for the network—and even make money doing so—but one cannot affect the network as a whole. It is starting to dawn on regulators that decentralized networks themselves are beyond regulation.

Because Bitcoin is decentralized, no single jurisdiction can assign it rights and duties. This makes it starkly different from, for example, real estate, for which it is well established that proprietary issues are governed by the law of the country where such real estate is situated (lex situs).[558] Bitcoin likewise differs from stocks, bonds, and even modern currencies which are clearly linked to specific issuers and thus carry counterparty risk. The absence of jurisdictions, issuers, and facilitators means Bitcoin is an asset class without legal risk at its core. Bitcoin just *is*. By observing the erosion of property rights in modern digitized asset classes, it becomes obvious how necessary the invention of Bitcoin truly was.

Most people think that when they buy a stock through their brokerage account, they own a share of a company. The truth is that in, for example, the U.S., which has the world's leading stock market, all one actually owns is a "security entitlement."[559]

556 UK Law Commission, "*Digital assets: Final report, HC 1486, Law Com No412,*" (Crown, 2023), page 19.

557 Lessig (1999), page 20.

558 Takahashi (2017), page 92.

559 European Commission, "*Federal Reserve Bank's reply to the EU Clearing and Settlement Legal Certainty Group's questionnaire,*" (European Commission, Internal Market and Services DG, MARKT/G2/D(2005)), https://archive.org/details/ec-clearing-questionnaire, page 2: "*The*

This entitlement does not empower the holders to assert rights against any person other than their broker. And it gets worse. The brokerages themselves do not 'own' the financial assets either. These are held by an "upper-tier intermediary" against which an original entitlement holder holds no rights at all, except in "extremely unusual circumstances."[560] It turns out that investors in U.S. stocks have only limited specific rights, such as economic rights (i.e., dividends) and certain ownership rights (i.e., a vote).[561] Moreover, other claims are held on the assets investors believe they own. And if the securities intermediary is a clearing corporation, the claims of its creditors have priority over the claims of entitlement holders.[562]

The court proceedings, resulting from the bankruptcy of Lehman Brothers, highlight the implications of this. In the lead-up to the failure, JP Morgan (JPM) had laid claim over assets as a secured creditor while being the custodian for these client assets. The court ruled in favor of JPM, citing that as a member of the "protected class," it was allowed to do so in the interest of financial stability under safe harbor rules.[563]

"securities entitlement" is the name given to the property rights and interests of the person holding a financial asset through a securities account;"

560 Ibid., page 7: "*...the securities intermediary does not "own" the financial assets credited to the securities accounts maintained on its books, although it may be reflected in the books of the issuer or its transfer agent as the registered holder or have a security entitlement (or be an investor/account holder) in respect of an upper-tier intermediary." "Article 8 does not give an entitlement holder any rights against an upper-tier intermediary, except as described below."*

561 Ibid., page 7: "*...however, the securities intermediary has an obligation to obtain and pass on those economic rights to the entitlement holder and to exercise ownership rights on behalf of the entitlement holder as further described below."*

562 Ibid., page 10: "If the securities intermediary is a clearing corporation, the claims of its creditors have priority over the claims of entitlement holders. 8-511(c)."

563 LEHMAN BROTHERS HOLDINGS INC., et al.,: Debtors. against JPMORGAN CHASE BANK, N.A., UNITED STATES BANKRUPTCY COURT SOUTHERN DISTRICT OF NEW YORK In re: Chapter 11 Case No. 08-13555, page 8: "*The Court agrees with JPMC that the safe harbors apply here, and it is appropriate for these provisions to be enforced as written and applied literally* ***in the interest of market stability****. The transactions in question are precisely the sort of contractual arrangements that should be exempt from being upset by a bankruptcy court under the more lenient standards of constructive fraudulent transfer or preference liability: these are systemically significant transactions between sophisticated financial players at a time of financial distress in the markets – in other words, the precise setting for which the safe harbors were intended." "The Court first must consider whether JPMC is eligible for protection under section 546(e). That subsection, like the safe harbors generally, applies only to certain types of qualifying entities. Specifically, section 546(e) covers pre-petition transfers made by or to a "financial institution" or "financial participant" in connection with a "securities contract." 11 U.S.C. § 546(e)." "JPMC, as one of the leading financial institutions in the world, quite obviously is* ***a member of the protected class*** *and qualifies as both a "financial institution" and a "financial participant."*

And that is not all. Since 2008, according to the BIS, regulatory reform and changes to risk management by market participants have increased the demand for collateral.[564] And when there is a market, the financial system provides. Unbeknownst to investors, financial assets are now routinely packaged into complex products and redistributed by collateral management services to meet the needs of financial institutions.[565] This system operates globally. And in the BIS paper cited, the property rights of the original (retail) investors are not even mentioned.

Berman already observed in 1983 that in property law, governmental and large-scale corporate interests have intervened to remove from most private owners a large share of their rights of possession, use, and disposition—that is, of what would in the past have been considered their rights of ownership—while at the same time imposing upon them obligations that "are more to be explained in terms of administrative law than in terms of civil law."[566]

In the context of financial assets, ownership, which is the first pillar of private property, has been severely weakened. The second pillar, the ability to use and to transact freely, is also being weakened. The chapter on international law discussed the existence of KYC and AML legislation issued by unelected global bodies. In practice, one first must fulfill a variety of requirements before one can even open an account or buy and transact in financial assets. Next, one's account is monitored and subject to freezing if one's activities are considered 'non-compliant.' Now that the world has grown accustomed to transaction rights having become conditional, it is only a matter of time before this infrastructure imposes more conditions. Dutch banks have already started measuring the CO_2 footprints and energy profiles of their customers to nudge compliance with international environment standards,[567] and the European Central Bank (ECB) is proposing future controls on how much money can be exchanged between different forms of the Euro[568] and on what one can hold and transact in crisis situations.[569]

564 BIS, "*Developments in collateral management services," (*Bank for International Settlements, Committee on Payments and Market Infrastructures, September 2014), page 2

565 Ibid., page 10, Diagram 4.

566 Berman (1983), page 35.

567 "*2. De soorten persoonsgegevens die we verwerken,"* (ING), accessed on Dec 12, 2024, https://www.ing.nl/de-ing/privacy-statement/de-soorten-persoonsgegevens-die-we-verwerken: "*Gegevens over Environmental Social Governance (ESG), zoals het energielabel van uw huis, een inschatting van uw CO2-voetafdruk of financiële gezondheid.*" [Author: they record information on energy use of your home and your CO2 footprint to calculate ESG scores. ESG scores come from international standards. All Dutch banks are engaged in such enforcement activities].

568 ECB, "*Report on a digital euro,"* (European Central Bank, Frankfurt, October 2020), https://www.ecb.europa.eu/euro/html/digitaleuro-report.en.html, page 28

569 Ibid., page 17

When financial institutions limit withdrawals, crypto-forum participants frequently express their misunderstanding of property rights by exclaiming, 'But it is my money!' This is a misconception. Money deposited in a bank is a bank deposit. A bank deposit transfers ownership to the bank and establishes a contractual relationship between the banker and the depositor. The UK's Lord Millet explained this in Foskett v. McKeown [2000]:

> *"We speak of money at the bank, and of money passing into and out of a bank account. But of course the account holder has no money at the bank. Money paid into a bank account belongs legally and beneficially to the bank and not to the account holder."*[570]

He added that, in case of a bank transaction, "No money passes from paying bank to receiving bank or through the clearing system. There is simply a series of debits and credits which are causally and transactionally linked."[571]

As Australian regulator, academic, and public policy practitioner Rhys Bollen explained, bank deposits are a contractual debt-based arrangement where the customer places funds with the bank to be withdrawn or paid to others later.[572] A deposit is by definition an unsecured advance of money to a bank for use by the bank in the ordinary course of its banking business.[573] Most modern payment systems are built upon a 'debt circulation' model.[574] Payments do not generally involve an assignment of underlying property rights. No money or property passes through the payment system. Instead, payments result in the increase and decrease in institutional liabilities owed to the payer and payee.[575] With certain transactions, such as when issuing a loan, banks 'create' these liabilities[576]—money out of thin air.

Modern money derives its 'backing' not from 'men with guns' platitudes but from an intricate network of *private* contracts. So much of our money is now privately

570	Foskett v. McKeown and Others [2000] UKHL 29; [2000] 3 All ER 97 (18th May, 2000), United Kingdom House of Lords Decisions.
571	Ibid.
572	Bollen, Rhys A., "*What is a Deposit (and Why Does It Matter?),*" (Murdoch University Electronic Journal of Law, Vol. 13, No. 2. p. 202, June 30, 2006), available at SSRN: https://ssrn.com/abstract=1756073, page 5.
573	Ibid., page 6.
574	Bollen, Rhys A., "*What a Payment is (and How It Continues Confuse Lawyers),*" (Macquarie Journal of Business Law, Vol. 2, p. 189, 2005), available at SSRN: https://ssrn.com/abstract=1756072, page 3.
575	Ibid., page 4.
576	Ibid., page 5: "*In some cases, property may be created or terminated.*" "*Where a transfer results in the payee having a balance with the payee FI for the first time, a chose in action will be created through the transaction.*"

issued that the ECB worries the declining use of cash could leave European citizens with no means of payment provided by the public sector.[577] Moreover, it considers the introduction of a central bank digital currency (CBDC) a matter of monetary sovereignty and a way to provide a monetary anchor for the payments system by ensuring that private money can always be converted into 'safe' public money.[578]

> *"Of all the many ways of organizing banking, the worst is the one we have today."*
>
> ~Mervyn Alister King (former Governor of the Bank of England)

What a contrast the Bitcoin network provides! To receive and own Bitcoin, one needs only to download a free open-source wallet. To transact with anyone on the network, all one does is initiate a transaction and sign it with one's private signature. The owner has full autonomy over where to send funds. No accounts or paperwork are needed. No complex contracts need to be drafted. The network determines the conditions of the transaction, and participation is voluntary and free (except for transaction fees). What does this all mean? If understood as an expression of free will and the ability to engage with others and the common will, then Bitcoin may be the purest expression of ownership rights currently available! Moreover, Bitcoin can be acquired, used, and discarded with full autonomy and without counterparty risk. As such, it offers pure transactional property rights as well. The decentralized network provides these ownership and acquisition rights free of charge to anyone, merely imposing a small gas fee on transactions. The only assets that approximate this are gold and silver bullion in private possession. However, Bitcoin is superior because one can express free will anywhere in the world, instantly, and at a low cost. Precious metals can only achieve this with the use of a financial intermediary or through secure transport (both of which introduce costs and counterparty risk).

Bitcoins in private holding cannot be transferred without the digital signature of the owner. Therefore, unlike bank deposits, private Bitcoin holdings cannot be frozen or confiscated. Additionally, they cannot be physically seized like cash or gold. Only a court order can compel the holder to surrender their private keys, and even then, the owner can choose between compliance and prison. In short, property rights in Bitcoin properly stored can only be taken away by deception or force.

With the invention of Bitcoin, we have come full circle. In a state of nature, everyone has rights to everything and can hold only possessions. The social contract turned

577 ECB, "*Report on a digital euro,*" (2020), page 10

578 European Commission, "*CALL FOR EVIDENCE FOR AN IMPACT ASSESSMENT,*" (European Commission, Ref. Ares (2022)2567612 – 05/04/2022), page 3.

possessions into property protected by law. The law grants property owners abstractions, known as rights, which primarily prohibit others from using the property. However, other citizens' rights limit these rights, and one can generally only exercise them in a single location. Bitcoin represents an asset class independent of any specific legal system or social contract. Cryptography, not law, protects these rights by preventing unauthorized use. Its ownership remains unrestricted by other people's interests, while holders can (practically) exercise their property rights in all jurisdictions.

For these reasons, Bitcoin is the purest expression of individual property rights in the twenty-first century, serving as an essential tool for financial liberty at a time when traditional property rights are becoming increasingly entangled in opaque contractual obligations.

> *Alice, Bob, Carroll, and Dave are investors. Alice owns 1.57 Bitcoin in cold storage. Bob owns stocks through a brokerage account. Carroll owns bonds in her retirement fund. Dave owns gold through his trusted bank. A financial crisis emerges worse than 2008. Panic spreads through the markets, and all asset prices plummet. Bob receives a worrying email from his broker. They have gone bankrupt, and Bob's assets are now tied up in bankruptcy proceedings. It turns out there are five other claims for each share he thinks he owns. Moreover, the upper-tier intermediary risks bankruptcy, meaning Bob could lose everything. Carroll learns that 30 percent of her bonds defaulted, and now quantitative easing inflates the value of her remaining investment away. There is nothing she can do, as all her assets are tied up in her retirement account. Dave thinks he has escaped this turmoil since he invested in a safe-haven asset. However, the bank notifies him that his gold position was liquidated due to 'increased volatility.' The nominal value is added to his account—minus fees, of course. He misses the price gains in gold, and now he has to deal with additional emergency measures imposed by the government, such as negative interest rates and withdrawal restrictions. Unaffected, Alice still owns 1.57 Bitcoin and can transact freely.*

Differences Between Blockchain and the Law

Do blockchain technologies differ from existing asset classes? How do they relate to existing law? To answer these questions, we must first look at the differences between blockchain technology and the law. Decentralized technologies are based on hard science, mathematics, and cryptography. They are formed by peer-to-peer networks and run by consensus. They provide a cryptographically secure framework that can be trusted to provide a predictable binary outcome. The systems

and their development are transparent and open source, with their code available for inspection by anyone with programming skills.

Legal systems are based on ideas and practices dating back thousands of years. They are subject to changing opinions and ideologies. Their outcomes and definitions are uncertain. Legal systems evolve slowly over time, in a non-linear fashion, and their development and workings are not always transparent. Laws are made by political processes and are often open to interpretation.

Comparing these systems side by side shows they are not alike. This calls for flexibility for observers from both fields. Contrary to the digital world, law is not binary. Law recognizes that reality is unpredictable. This is why law employs open concepts such as 'reasonability,' 'proportionality,' and 'necessity.' These ensure that all particularities of a specific case are considered. Law generally allows for making exceptions and the weighing of extraordinary situations. Such open terms require a human mind that can consider and weigh all relevant circumstances.[579]

We must acknowledge that the development of a technology is not the same as the development of a legal system. We saw that proven technologies often form a base layer on which future technologies can be built. As a result, the way the Internet works does not change with each judge or government. The same will be the case with blockchain ecosystems such as Bitcoin and Ethereum, as over time, it becomes almost impossible for their base layers to change.

One could argue that conventions, constitutions, and declarations of independence function as a base layer for our legal system. However, their interpretations and influence change over time. In legal systems, the top layers can change the underlying layers over time. There is a feedback loop going on. They are more organic and alive. They are reflexive. As a result, the development of law and technology each requires a different approach. Merging the two cannot be done with just words or code alone—a bridge is needed.

> *Bob is an entrepreneur in the crypto space and has Alice as a regulator. Dave, the lawmaker, passes a law that leaves room for interpretation. Alice takes the opportunity to claim that Bob must meet her extensive regulatory demands. Bob disagrees and sues Alice. Carol, the judge, sides with Bob and explains why Alice's claim was unfounded. Dave, recognizing the law's controversial nature, passes an amendment to clarify its intent. Bob, Dave, Alice, and Carol together shape the law through this reflexive process. As a result, society at large gradually learns what to expect.*

579 UNOPS (2018), page 58, [Author: paragraphs edited for readability].

§ 7.4. The Search for a Legal Framework

> *"In cases where [the laws] can be observed simultaneously, let them [all] be observed; when this is impossible, the law of superior rank shall prevail."*
> ~Hugo Grotius

Cryptocurrencies offer secure property rights and complete freedom to transact, even without an applicable legal framework. But legal ambiguity works two ways: governments that cannot interfere with property rights cannot easily define and protect them. Determining applicable law for many blockchains and smart contracts poses significant challenges. Moreover, state governments seem to be obsessed with trying to shoehorn open-source code into their frame of reference. They are betting on being able to put the genie back into the bottle.

As a result, and at least for now, we can expect little from them in empowering the use of peer-to-peer technologies. This leaves the industry on its own to draft helpful regulations around cryptocurrencies. But as fundamental as the question of applicable law is, the industry itself has treated law as a nuisance. Curiously, even the legal blockchain projects often ignore the law and focus on code. As a result, certain projects aim at creating states without recognizing what a state is. Others design a new type of corporation but fail to address what is required to be a person capable of acting under the law. Then there are the arbitration systems without governing laws or a means to enforce rulings off-chain. And what of the smart contracts that bind no one and are not enforceable in court? When designing an airplane, at one point you must address the issue of gravity.

One solution remains often overlooked by these projects: they can draft their legislation and choose their own governing laws. As explained in future chapters, an entire (decentralized) private legal system can be built for the crypto industry. One requirement of such a system is a proper legal framework. And since our financial system is mostly a private one, private innovation is allowed.

The Legal Framework

A legal framework is a broad system of rules that governs and regulates decision-making, agreements, and laws.[580] It helps to imagine it as an umbrella, governing all beneath it. A fine example would be a constitution, which provides the framework for the organization of government. Branches of government maintain significant

580 *"Legal Framework,"* (TransLegal), accessed December 18, 2019, https://www.translegal.com/legal-english-dictionary/legal-framework

control over the laws they make, but only as far as the constitution allows. There is, thus, a hierarchy of laws. This applies to everyone, including those operating on a blockchain.

A specific example would be the laws applicable when starting a business in Dubai. The main applicable legal framework here is the United Arab Emirates (UAE) Federal Law No. 2 on Commercial Companies.[581] However, this law delegates its authority to free zones. Free zones in Dubai enact their own laws for companies operating in them, while the federal law applies outside these zones. Individual free zone companies sign a memorandum and articles of association (M&A), which govern the company and define the rights and duties of shareholders and directors.

As a result, a director/manager operating a Dubai-based free zone company acts within the company's legal framework. This framework falls within the Dubai free zone framework, which is ultimately subject to the federal legal framework of the UAE. This is demonstrated in the following image:

Legal frameworks generally are restricted to one specific topic or geographical location. For example, the UAE companies law applies to companies and not to marriage. The Indian constitution applies to the Republic of India, not to Brazil. This is why in this book legal frameworks are displayed as an upside-down pyramid. Higher laws provide the framework and boundaries for the lower laws.

What legal framework can be applied to decentralized networks? Before we can come up with an overall legal framework for blockchain technology, we must first explore what needs to be governed. As far as legal projects in the decentralized space are concerned, they can be divided into six categories:

- Smart contracts
- Tokenization
- Decentralized finance (DeFi)
- Decentralized organizations

581 Federal Law No. 2 of 2015, ON COMMERCIAL COMPANIES, Issued on 1/04/2015, Corresponding to 17 Dhi Al-Hijjah 1436 H, United Arab Emirates.

- Decentralized jurisdictions
- Decentralized dispute resolution

The following chapters will explain these projects, identify their legal challenges, and propose solutions. The eventual legal framework to govern all these technologies is provided in Section III.

§ 7.5. Summary and Interpretation

Key Takeaways:

- Bitcoin revolutionized the idea of money by enabling near-instant, low-cost global payments without intermediaries.
- Bitcoin is secured by open-source code, math, and unbreakable cryptography, as opposed to complex regulations and oversight.
- Ethereum expanded on Bitcoin's concept by creating a distributed world computer capable of running smart contracts and decentralized applications. Many projects followed.
- Certain aspects of cyberspace are regulated by code.
- Legal scholar Lawrence Lessig observed that to preserve liberty and limit governmental power, certain technological designs are better than others.
- Cryptocurrencies, particularly Bitcoin, embody many liberty-preserving characteristics.
- As a result, regulatory efforts for cryptocurrencies focus on intermediaries and use of the technology rather than the technology or infrastructure itself.
- Without private property, there can be no expression of free will in the public realm.
- Ownership rights include the right to possess, enjoy, and dispose of property.
- Every right is owned, and nothing can be owned except a right.
- The ability to engage in contracts is an integral part of property rights.
- Traditional financial assets involve complex intermediary structures that erode ownership rights.
- Traditional financial assets cannot be freely owned, nor can one transact in them without an intermediary.

- Bitcoin offers full autonomy over holdings and transactions without regulated intermediaries or counterparty risk. It can be acquired, used, and discarded with full autonomy.
- Bitcoin is an asset class with no legal risk at its core, unlike real estate or stocks and bonds.
- Bitcoin may be the purest expression of individual property rights in the twenty-first century.
- Determining applicable law for blockchain transactions is hard, creating legal uncertainty.
- Merging law and blockchain cannot be done with just words or code—a bridge is needed.
- A legal framework is a system of rules that governs and regulates underlying systems.
- By creating its own legal framework, the industry can create a bridge to existing governing laws.

VIII

Smart Contracts

In 2013, a then nineteen-year-old Vitalik Buterin envisioned a world where contracts could execute themselves. What started as a simple idea has evolved into a multi-billion-dollar ecosystem where every second, thousands of 'smart contracts' execute on various decentralized networks—moving money, transferring assets, or updating records without human intervention. This constant hum of automated transactions represents the backbone of a new digital economy where trust is built into the code itself, promising a future of frictionless global commerce. A farmer in Kenya receives an automatic insurance payout when satellite data shows insufficient rainfall. A musician earns royalties the instant her song plays online. A house sells itself when the correct amount hits an escrow account. Are these scenarios from a sci-fi novel? Or are they real applications of smart contracts today, quietly transforming how we conduct business across borders?

Smart contracts truly represent one of the major innovations coming from the crypto space. However, the idea behind them is not new. In 1996, Nick Szabo wrote,

> *"A smart contract is a set of promises, specified in digital form, including protocols within which the parties perform on these promises."*[582]

To deduce what he means, we can look at a primitive ancestor of a smart contract: the vending machine. It works by detecting the insertion of a quarter and then executing a sale. Smart contracts take this principle to the next level: they detect digital payments and execute (complex) digital transactions. They can handle transfers of digital property and of property controlled through digital means. Smart contracts offer automated and irreversible transfers of value and ownership based on self-executing contracts.

582 Szabo, Nick, *"Smart Contracts: Building Blocks for Digital Markets,"* 1996, http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_2.html

The transfer of property is, as shown in the previous chapter, a transfer of property rights. This raises several questions. Firstly, how do smart contracts relate to the legal world? For that, we must take a step back to understand what a contract is. Next, we will dive a bit deeper into the workings of smart contracts and how they relate to the world of law.

§ 8.1. Legal Contract Fundamentals

Burnham & Kraynak defined a contract as "simply a promise or set of promises enforceable by law."[583] Based on this definition, two questions arise: what law is being enforced, and what makes a promise enforceable? On the first point, the same authors wrote that in the U.S.,

> *"Contract law is nuanced and fact intensive. A 'rule' may differ, for example, depending on whether the parties are two giant corporations having their lawyers negotiate an agreement or family members making an agreement over the dinner table."*[584]

We can conclude that the type of contract determines which laws apply. Different countries can also apply different laws to the same contracts. Burnham & Kraynak further stated that to be enforceable, a contract must be

> *"...a bargained-for exchange that requires the following three ingredients:*
>
> - ***Offer***: *Party A's promise to Party B in exchange for something.*
> - ***Acceptance***: *Party B's assent to Party A's offer.*
> - ***Consideration***: *What each party offers in exchange for the other party's promise."*[585]

However, other requirements help determine a contract's validity. These can include the requirement that contracting parties be of legal age. The contract's subject matter might have to comply with consumer protection statutes. Additionally, questions of legality or fairness may affect validity.[586]

Lessig explained that no matter how you look at it, contracts involve the law. Even the simple vending machine example depends on a working legal system to prevent

583 Burnham, Scott J., Kraynak, Joe, "Contract Law For Dummies," (John Wiley & Sons, New Jersey, 2012): Part 1, Chapter 1

584 Burnham & Kraynak (2012): Part 1, Chapter 1

585 Burnham & Kraynak (2012): Part 1, Chapter 1

586 Burnham & Kraynak (2012): Part 1, Chapter 2

theft. It relies on health and safety standards to ensure the safety of sold items. In addition to laws governing the transaction itself, there are laws that regulate the lives and activities of the contracting parties. According to Lessig, contracts only partially formalize the arrangement between people, because the future holds multiple possible scenarios. What contracts do all the time is include ambiguous sections on things that cannot be predicted. And if we are not sure, we can ask a judge or arbitrator to figure that term out.[587] This approach reflects a tendency in certain legal systems, particularly in the U.S., to rely heavily on court interventions. In many parts of the world, courtroom litigation is neither an easy nor culturally preferred method for dispute resolution. This preference for non-judicial resolution is particularly evident in international business and the semi-anonymous realm of blockchain technology. What Lessig hinted at, though, is an issue that modern contract theory struggles with: incompleteness.

Contractual Incompleteness

Law professor Robert E. Scott (1944–) explained a fundamental challenge in contract design: contractual obligations are agreed upon ex-ante (when the contract is formed) but enforced ex-post (after the transaction has broken down and parties are litigating). Because courts have the benefit of hindsight, the ex-post world sometimes, though not always, resolves the uncertainties of ex-ante contracting. To resolve those uncertainties, however, courts must be empowered to interpret contract terms.[588]

In an ideal world, everything can be anticipated and written into a contract beforehand. However, the real world rarely allows for such foresight. American economist Oliver Hart (1948–) won the Nobel Memorial Prize in Economic Sciences (2016) for his work on incomplete contracts. He explained that until recently, formal literature focused primarily on complete contracts. These are contracts where everything that can ever happen is written into the contract (with no room for unanticipated contingencies). Lawyers have long recognized that real-world contracts rarely achieve this level of completeness: they are poorly worded, ambiguous, and leave out important things. They are incomplete.[589]

587 Lessig, Lawrence, Lecture on Smart Contracts, [Author: I was not able to retrieve the exact lecture for an exact citation, and this is drafted from my notes].

588 Scott, Robert E., "*Contract Design and the Shading Problem,*" (Marquette Law Review, Forthcoming, Columbia Public Law Research Paper No. 14-472, July 1, 2015), https://ssrn.com/abstract=2628256, page 8.

589 Hart, Oliver, "*Incomplete Contracts and Control,*" (American Economic Review, vol. 107, no. 7, July 2017), https://doi.org/10.1257/aer.107.7.1731, page 1732.

Hart explained that incomplete contracts pose various problems, often stemming from changing circumstances and consequently different behaviors of one or both contracting parties. One such category of behaviors is the misuse of power, for example, by unilaterally raising or lowering prices, changing delivery dates, or requiring more onerous employment terms. Economists call this the hold-up problem. An equally important problem is shading, a retaliatory behavior in which one party stops cooperating, ceases to be proactive, or makes countermoves. Shading happens when a party is not getting the outcome it expected from the deal and feels the other party is to blame or has not acted reasonably to mitigate the losses.[590]

Hart continued that economists [like software engineers] are drawn to areas with simple, elegant, and uncontroversial models. The area of incomplete contracts is not like that; it is messy. There may be incentive constraints arising from moral hazard or asymmetric information, and parties might not act fully rationally. The latter is problematic because one cannot model irrationality.[591] Nabil Al-Najjar, professor of managerial economics and decision sciences, summarized the problem: even the simplest of economic transactions can be so complex that it is impossible to list the entire range of outcomes and contingencies that might affect contractual performance. This complexity implies that real-world contracts seldom provide an exhaustive description of the rights and obligations of the contracting parties in every possible contingency.[592]

According to Hart and Frydlinger, the economics literature has explored two possible solutions to deal with contract incompleteness. First, it has been suggested that (vertical) integration can improve matters. A second approach argues that the inability to anticipate all future contingencies can be circumvented through the use of ingenious mechanisms included in the contract.[593] The authors proposed a third approach: a "formal relational contract." It emphasizes shared goals, structured

590 Frydlinger, David, Hart, Oliver D., Vitasek, Kate, "*A New Approach to Contracts – How to build better long-term strategic partnerships,*" (Harvard Business Review, from the Magazine September-October 2019), https://hbr.org/2019/09/a-new-approach-to-contracts.

591 Hart, O. (2017), page 1744.

592 Al-Najjar, Nabil, "*Incomplete Contracts and the Governance of Complex Contractual Relationships,*" (The American Economic Review 85, no. 2, 1995), http://www.jstor.org/stable/2117961, page 432

593 Frydlinger, David, Hart, Oliver D., "*Overcoming Contractual Incompleteness: The Role of Guiding Principles,*" (Forthcoming, Journal of Law, Economics and Organization, December 19, 2022), https://ssrn.com/abstract=4307300, page 3, [Author: the authors cite: Maskin Eric and Jean Tirole, "*Unforeseen Contingencies and Incomplete Contracts.*" (Review of Economic Studies. 66: 83-114, 1999), which expresses the outcome of contracts in complex formulas with binary outcomes. This a fine example of academics trying to replace an inconvenient complex reality with predictable models].

communication by the parties, and the adoption of guiding principles that the parties will apply if and when an uncontracted event occurs. Guiding principles may include equity, loyalty, and honesty.[594] According to the authors, a key role of a contract is to align parties' views about what is reasonable.[595] The guiding principles serve many functions. They steer the parties throughout the rest of the process, they provide a framework for resolving potential misalignments when uncontracted-for circumstances occur, and they help the parties when changes to the contract are needed. The parties break down their shared vision into more concrete strategic goals or desired outcomes and detailed objectives. Having set the foundation for the relationship in the first steps, the parties hammer out the terms of the deal—for example, responsibilities, metrics, and pricing.[596] With the right mindset, contract development becomes a joint problem-solving exercise rather than an adversarial contest and includes well-defined communication processes to ensure continuous alignment of interests and expectations.[597] The authors further explained that businesses often do not rely on their written contracts but instead on social norms and industry standards to overcome challenges posed by incomplete contracts.[598] We come back to what this means for the rudimentary ideas underpinning smart contracts, which are explained next.

§ 8.2. What Is a Smart Contract?

The beginning of the chapter discussed the original idea behind smart contracts. With the invention of Ethereum, they have become a reality. As such, we can look at them in more detail. Antonopoulos and Wood define smart contracts on the Ethereum network as:

> *"...immutable computer programs that run deterministically in the context of an Ethereum Virtual Machine as part of the Ethereum network protocol—i.e., on the decentralized Ethereum world computer."*[599]

Let us unpack this. The main conclusion is that smart contracts are computer programs. The word 'contract' has no legal meaning in this context. Being immutable means that once deployed, the code of a smart contract cannot change. At the same time, smart contracts are deterministic, meaning that the outcome of the execution of a smart contract is the same for everyone who runs it. The Ethereum

594 Frydlinger & Hart (2022), page 3.
595 Frydlinger & Hart (2022), page 4.
596 Frydlinger & Hart (2022), page 25.
597 Frydlinger & Hart (2022), page 37.
598 Frydlinger & Hart (2022), page 26 [Author: edited for readability].
599 Antonopoulos & Wood (2019), What Is a Smart Contract, page 127.

Virtual Machine (EVM) is a computation engine, not hugely dissimilar to other virtual machines. It handles the deployment and execution of smart contracts, which will involve an update to the blockchain computed by the EVM. The EVM runs as a local instance on every Ethereum node, but the system, as a whole, operates as a single "world computer."[600]

One interesting aspect of smart contracts is that they are not controlled by anyone, as one could for example control a cryptocurrency token through a private wallet. We can say that smart contract accounts own themselves. The smart contracts 'exist' on the blockchain, and anyone can see and interact with them. They 'sit' there and only run when called by a transaction. All smart contracts in Ethereum are executed, ultimately, because of a transaction initiated from an externally owned account—an account created by or for human users. A contract can call another contract that can call another contract, and so on. But the first contract in such a chain of execution will always have been called by a transaction. Smart contracts never run "on their own" or "in the background."[601] As discussed earlier, running a smart contract requires a gas fee.

Due to the finality of transactions on a blockchain, a smart contract's code, once deployed, cannot be changed. In specific cases, a contract can be deleted, removing the code and its internal state (storage) from its address. However, this capability will only be available if the contract author programmed the smart contract to have that functionality.[602] Smart contracts are increasingly being designed to be upgradable, allowing them to develop along with the overall objectives of blockchain projects. This centralizes control over the smart contract, as generally, only one specific wallet can upgrade the code. This wallet thus functions as a 'master key.'[603]

Smart contracts have been used in insurance, health care, the gaming industry, copyright management, supply chain management, shipping, and real estate ownership.[604] These self-executing contracts form the basis for all the existing applications discussed in this book, such as DAOs, NFTs, and DeFi, as well as those

600 Antonopoulos & Wood (2019), What Is a Smart Contract, page 128, [Author: edited for readability, and included explanation of EVM I distilled from Chapter 13, The Ethereum Virtual Machine, on page 297. I also replaced the concept of a "state" with "updates to the blockchain," since getting into the technical workings of Ethereum's transaction based state machine seems excessive for this explanation. It also might work differently on other chains].

601 Antonopoulos & Wood (2019), Life Cycle of a Smart Contract, page 128-129.

602 Antonopoulos & Wood (2019), Life Cycle of a Smart Contract, page 129.

603 Author: as explained to me by blockchain developer Theodorus Augustinus.

604 Dilmegani, Cem, "*Top 9 Smart Contract Use Cases & Real-life Examples,*" (AI Multiple Research, Sep 20, 2024), accessed on Dec 10, 2024, https://research.aimultiple.com/smart-contracts-examples/

proposed later in the book, such as DAAs, the Decentralized Legal System. and the codification of Decentralized Law.

§ 8.3. Smart Contracts and the Law

How do smart contracts relate to (contract) law? Contemplating this issue in 2008, Nick Szabo made the distinction between "wet code," interpreted by the brain, and "dry code," interpreted by computers.[605] The law uses wet code, while smart contracts use dry code:

Wet code = traditional contracts = human language
Dry code = smart contracts = computer language

Are these two languages compatible? To better understand this, let us examine a real-world example that illustrates how outcomes often differ from initial agreements:

> *Bob hires Alice to build a website in six weeks. Bob funds a smart contract that pays Alice six weekly payments based on milestones. In the first week, Alice finishes her milestone. The second week, she falls sick and cannot reach the milestone set for that week. In the third week, she managed to finish her backlog of work as well as the milestone for week three. In the fourth week, she fails to meet her target due to a lack of feedback from Bob. In the fifth week, although Alice intends to work, a fallen tree disrupts her Internet connection. Bob has had enough and wants to terminate the arrangement. He does not want to pay any more and wants part of the money back. Alice, on the other hand, wants to keep working and keep the money for the work already performed. Who gets what?*

Human language and legal systems are well-adjusted to the subtleties of this dispute. A judge or an arbitration court could come up with a fair and binding ruling. However, creating computer code that anticipates all these variables in advance is impossible—even for a simple freelance project. Keeping in mind the notion of incomplete contracts, smart contracts as well can be vague, contain mistakes, or incorrectly reflect the intention of one or both contracting parties. It would be misguided to assume that these issues are unique to wet code and that dry code is immune to such problems. Dry code is, after all, created by humans.

605 Szabo, Nick, *"Wet code and dry,"* (Unenumerated, August 24, 2008), accessed April 15, 2018, https://unenumerated.blogspot.de/2006/11/wet-code-and-dry.html

Putting the 'Smart' in Contracts

To alleviate these issues, ideas have been proposed for smart contracts to use oracles to interact with the world. For example, they could use live weather data feeds to determine crop insurance payouts[606] or leverage prediction markets to establish objective truths.[607]

But how wise is it to blindly rely on data? To give an example, according to the Gerontology Research Group, only thirty-five individuals are known to have lived to the age of 112. Yet, the Social Security Administration of the U.S. has about 6.5 million people aged 112 in their database.[608] These individuals' deaths were not officially registered. This could have significant consequences for life insurance smart contracts relying on 'official' numbers.

Moreover, numbers alone might not tell the entire story. Take the example of crop insurance mentioned earlier. Before a storm, an insured farmer might deliberately leave crops in the field or hastily harvest everything. Alternatively, the farmer might harvest half the crops in time, with the ruined crops still holding significant value as animal feed. Subtleties like these, again, cannot be coded into a smart contract beforehand, but they do affect the pay-out obligations of the insurance company.

We saw that modern contract theory is moving away from the idea that contracts are rigid and have binary outcomes. It challenges the notion that contractual relationships can be wholly formalized ex ante. It is clear from the theory that real contracts leave things open to changing circumstances. Furthermore, one must consider the numerous variables involved in building and formalizing a business relationship between two (or more) parties. Especially when teams collaborate to develop a new technology, it is self-evident that the specifics cannot be known beforehand. Trying to fix relationships in rigid smart contracts risks creating uncertainty down the road when the facts and circumstances inevitably change. This uncertainty is compounded by questions about the legality of smart contract

606 Buterin (2013): *"Crop insurance. One can easily make a financial derivatives contract but using a data feed of the weather instead of any price index."*

607 Hanson Robin, *"Shall We Vote on Values, But Bet on Beliefs?,"* (George Mason University, 2013), https://mason.gmu.edu/~rhanson/futarchy2013.pdf: "According to most experts in economics and finance, speculative markets are exemplary info institutions. That is, active speculative markets do very well at inducing people to acquire info, share it via trades, and collect that info into consensus prices that persuade wider audiences."

608 O'Carroll, Jr. Patrick P., *"Numberholders Age 112 or Older Who Did Not Have a Death Entry on the Numident,"* (Office of the Inspector General, Social Security Administration, A-06-14-34030, March 2015), accessed on March 20, 2025, https://oig-files.ssa.gov/audits/full/A-06-14-34030_0.pdf

technology itself and the ongoing regulatory uncertainty surrounding blockchain technology as a whole.

The crypto community often expresses the desire to replace messy human systems with predictable computer code. But unlike computer code, human life does not result in binary outcomes. For real-world legal applications, we must either simplify the world into binary decisions or temper our expectations about what smart contracts can effectively govern. Moreover, there are many applications of smart contracts that have no legal ramifications. Therefore, it could be argued that smart contracts are better suited to automating specific (simple) aspects of human life and that we should leave governing complex human behavior to wet code. In this light, **smart contracts are firstly a technological development** rather than a legal one.

Smart Contract Legal Considerations

Blockchain legal experts Primavera De Filipi and Aaron Wright have argued that smart contracts, based on code, offer significant advantages when it comes to clarity, precision, and modularity. Written legal contracts often suffer from poor drafting, inconsistent terms, and confusion about the actual intent of the parties. Software code can decrease contractual ambiguity by turning promises into objectively verifiable technical rules, decreasing the risk of misinterpretation of what obligations are. Smart contracts are modular, and libraries of smart contract code under open-source licenses can be used, reused, and progressively refined thanks to public scrutiny and feedback. Eventually, smart contracts could be combined like Lego blocks, creating more complex, comprehensive, and sophisticated legal agreements.[609]

Sirena and Patti have argued that the self-executing and self-enforcing characteristics of smart contracts represent a source of innovation for general contract law. The self-executing character should eliminate the occurrence of contractual breaches and make turning to the courts to obtain legal protection less likely. In addition, the code does not theoretically require interpretation, since there is less ambiguity in smart contracts.[610] They have further argued that inflexibility does not constitute a weakness of smart contracts. Instead, it makes clear that self-execution and self-enforcement could bring substantial benefits only in certain legal relationships, where parties are

609 Filippi & Wright (2018), The Benefits of Code, page 81-82, [Author: summarized from a list of benefits].

610 Sirena, Pietro, Patti, Francesco P., *"16 Smart Contracts and Automation of Private Relationships. In: Micklitz H-W, Pollicino O, Reichman A, Simoncini A, Sartor G, De Gregorio G, eds. Constitutional Challenges in the Algorithmic Society,"* (Cambridge University Press, **01 November 2021**), page 319, [Author: authors cite a number of sources; edited for readability].

interested in a simple and instantaneous exchange.[611] They have further suggested that self-execution does not necessarily apply to the entire agreement. Indemnity payouts, insurance triggers, and various other provisions of the contract could be automated and self-fulfilling, while other provisions may remain subject to an ordinary bargain and be expressed in natural language.[612] They have wondered whether smart contracts will diminish transaction costs due to the complexity of digital solutions and the need to acquire the necessary knowledge to create them.[613]

Blockchain attorney Andrew M. Hinkes observed that some of the value gained by smart contracts' predictability and automated execution may be offset by their inflexibility. Since smart contracts cannot be modified once deployed, errors or bugs in their code are usually not repairable. Similarly, smart contracts usually cannot be stopped or paused once deployed and funded. This becomes problematic because smart contracts may have latent defects or be undermined by external actions affecting their code or underlying blockchains. These issues may cause smart contracts to behave unexpectedly or fail to execute as intended. Other smart contracts relied upon to act as oracles may have bugs or may fail, which may affect the smart contracts at issue. All these conditions may give rise to disputes over smart contract outcomes, in turn resulting in litigation.[614]

Smart Contract Technical Constraints

Various technical constraints on smart contracts could have consequences that warrant attention from the law. First, the public nature of blockchains makes smart contracts defenseless against technological surveillance and introduces risks of privacy violations. In addition, systems based on smart contracts can contain vulnerabilities that allow for exploitation by hackers and scammers. Crypto projects try to prevent these through code audits. They generally open source their code, allowing the community to scrutinize the developers' work. This process is sometimes supported by bug bounties: rewards offered to individuals who discover security issues.[615]

Smart contracts are typically written in a high-level programming language, such as Solidity. But to run on a blockchain, they must be compiled to low-level bytecode (zeros and ones that computers can read). Decompiling computer code back to its human-readable source code is challenging, particularly when the source code contains natural language elements. Without having the corresponding source code,

611 Ibid., page 320.
612 Ibid., page 320.
613 Ibid., page 319, [Author: authors cite a number of sources; edited for readability].
614 Hinkes, Andrew M., "*The Limits of Code Deference,*" (The Journal of Corporation Law, Vol. 46:4, July 19, 2021), page 876, [Author: paragraph edited for readability].
615 Author: based on personal observations.

figuring out exactly what a smart contract was meant to do from the blockchain bytecode alone has proven to be difficult.[616] For a third party to check the legal implications of a smart contract, they must first verify the smart contract itself. One way of doing this is by compiling the source code and matching it with what is uploaded onto the blockchain.[617]

Ultimately, courts need to ensure they are ruling on verified, unaltered smart contract code. To prevent mismatching issues, smart contracts that are the product of verified open-source code can be subjected to version control. Smart contracts, particularly those containing human data, could potentially be stored on the blockchain in a format readable by a user interface. Exploratory work on this kind of standardization is being done by various initiatives. One example is an organization called Openlaw, which is creating standards for contract templates that are readable by machines.[618]

Smart Contract Legality

What, then, is the legal status of smart contracts? The United Nations Office for Project Services (UNOPS) notes that, from a technological perspective, smart contracts are simply deterministic computer software replicated and executed on a blockchain. The term smart contract in this respect is unfortunate because a smart contract does not always have legal significance. Moreover, the term suggests a legal contract is formed, for which smart contracts might be missing essential attributes. Smart contracts can play a part in a wide variety of legal domains, and their use can be considered as a source of rights and obligations, or only as an execution thereof. The legal status of smart contracts will need to be determined for each particular use case in relation to a particular governing legal system.[619]

UNOPS explains that each jurisdiction determines the requirements for a contract to be considered concluded. A primary requirement of an agreement is clarity on what the parties have agreed upon. In this context, and depending on the legal

616 Author: these are my own conclusions after learning how to create smart contracts.

617 "*Verifying smart contracts,*" (Ethereum.org, January 19, 2023), https://ethereum.org/en/developers/docs/smart-contracts/verifying/, accessed on May 5, 2023: "*Source code verification is comparing a smart contract's source code and the compiled bytecode used during the contract creation to detect any differences. Verifying smart contracts matters because the advertised contract code may be different from what runs on the blockchain.*"

618 "*#Conversion Tool,*" (Open Law), accessed on March 5, 2024, https://docs.openlaw.io/conversion-tool/: "*The OpenLaw protocol relies on a markup language to transform natural language agreements into machine-readable objects with relevant variables and logic defined within a given document (what we call a "template").*"

619 UNOPS (2018), 06 Legal aspects of smart contracts, page 89, [Author: paragraph is a summary of the chapter].

system, more meaning is attributed to the written representation of the agreement or the intentions of the parties.[620] Both of these are found in a wet code contract. An additional issue stems from smart contracts generally being based on payments in cryptocurrencies, such as Bitcoin and Ether. Therefore, in addition to the smart contracts themselves, the legal status of such coins could influence if a smart contract is enforceable or even valid.[621] This could be particularly relevant if the underlying blockchain faces regulatory scrutiny, as is the case, for example, with certain privacy coins. Consequently, smart contracts can have various legal manifestations in both private and public domains. They could represent a contract or the execution of a contract, a specific condition in a contract, a unilateral legal act, a decision under public law, the automatic execution of a (legal) process, or an obligation of compliance with (fiscal) law.[622]

Hinkes has wondered what kind of ruling can be enforced against a smart contract. Given the decentralized nature of smart contracts and their global use, the question of jurisdiction becomes relevant. Any enforcement action against smart contracts may alter the rights and assets of third parties, raising significant due process and notice concerns. This suggests that in many cases, a court's power to compel will be limited to specific remedies against participants for their use of smart contracts, as opposed to remedies that impact the decentralized ventures that build them.[623]

Smart contracts are novel technologies, and as blockchain legal expert Mark Giancaspro has rightly observed, the law deals with new technologies all the time. As such, there is precedent for many of the functions of smart contracts to be considered binding before the law. For example, explicit consent is not necessary for a contract to form. Consider a car parking ticket dispenser: an agreement is finalized the moment money enters the machine.[624] As such, if parties post a smart contract to the blockchain authorizing the transfer of assets upon the occurrence of predetermined conditions, this is indicative of mutual assent to the arrangement.[625]

620 UNOPS (2018), 6.2.1 A closer look: The smart contract as a contract, page 90-91.

621 UNOPS (2018), 6.2.1 A closer look: The smart contract as a contract, page 92.

622 UNOPS (2018), 6.2. Conceivable Legal Manifestations, page 90.

623 Hinkes (2021), page 880.

624 Giancaspro, Mark, *"The Consideration Myth About Smart Contracts, Research Paper No. 2020-135,"* (Australian National University Journal of Law and Technology, Vol 1(1)), page 40: *"A purchase from a vending machine, website, carpark ticket dispenser and the like—all interactions between human and machine and which do not involve any manifest expression of contractual obligations—gives rise to a contract as much as a complex negotiated services agreement between two or more humans. As Lord Denning explained in the famous case of Thornton v Shoe Lane Parking Ltd, speaking in the context of carpark ticket dispensers, the very moment the money (or other input) enters the machine, the contract is concluded."*

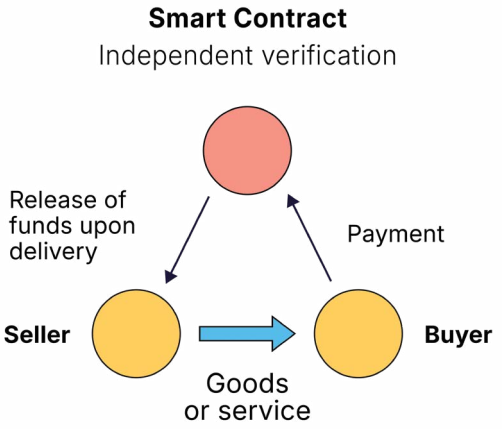
625 Ibid., page 39: *"For example, contracts can not only be entirely verbal but may be implied from mere conduct. There is even a contemporary trend to visualise contracts in pictorial*

Hinkes has suggested that those authoring smart contracts often practice code deference. This is when decentralized ventures attempt to prevent their participants from suing over smart contract outcomes by requiring that their human participants defer to and agree to be bound to the outcome of smart contract execution.[626] Because courts have limited power over blockchain technology, deference to code outcomes will be necessary for decentralized ventures to avoid being interrupted and impaired by litigation holds, orders granting injunctive relief, and the uncertainty of litigation.[627] However, neither legal contracts nor code can prevent a party from filing a lawsuit.[628]

Even with all the technological and legal innovation, smart contracts must consider existing legal frameworks. Despite the crypto community's libertarian leanings, all contracts involve rules and regulations. These apply both to the recognition and enforcement of contracts and to the activities of the parties involved. The private individuals who collaborate to build these networks operate within the private law layer, as discussed in the first section of this book. At most, they can design the systems that regulate their own activities. Other layers of law naturally govern their interactions, especially what this book labels civil and international law.

§ 8.4. Smart Contract Legal Framework

The previous sections have demonstrated that smart contracts' predictability, transparency, and measurable outcomes offer a tremendous opportunity for real-world applications. At the same time, the legality of smart contracts can be questioned. For smart contracts to have any force in the real world, they need to be wrapped in a wet code framework.



To understand the needs and possibilities, let's consider a decentralized 'Amazon Model'

form. There seems no good reason that parties could not reduce the terms of their agreement to code and authorise a smart contract to enforce that code. No known statute or common law authority forbids this. If parties post a smart contract to the blockchain authorising the transfer of assets upon the occurrence of predetermined conditions, this is clearly indicative of mutual assent to the arrangement. The consideration subsists in the complementary rights and obligations explicitly captured and autonomously traded in the smart contract's coding."

626 Hinkes (2021), page 870.

627 Hinkes (2021), page 881.

628 Hinkes (2021), page 896: *"IV. IS THE PURSUIT OF CODE DEFERENCE WORTHWHILE?"*

marketplace. In this model, products are shipped to buyers by courier, with payment made via smart contract upon delivery. This can be done by the following smart contract:

> *Bob buys goods from Alice. He pays into a smart contract, and she ships the product. The smart contract independently verifies the delivery of the product and releases the funds if all conditions of the sale are met. When either the independent verification of delivery takes place or Bob approves the transaction, the payment is released. If the goods are not delivered or the payment is not approved by Bob within one month, the payment is returned.*
>
> *The independent verification could either be carried out manually by a third party or fully automatically through a data feed. In this case, the smart contract tracks the delivery online with a data feed provided by the courier. Upon delivery or signature by Bob, Alice's funds are released.*

Such a smart contract could serve as the foundation to many payment systems. However, even though most transactions proceed smoothly, disputes can arise even from such simple transactions. The package might have been delivered to a neighbor, been stolen by the delivery person, arrived too late, or been damaged by rain. At this point, a human language contract becomes necessary. It is the only way to predetermine refund policies, set dispute resolution guidelines, provide clear guidance to all stakeholders about what has been agreed upon and by whom, and stipulate which laws apply.

Merging Smart Contracts with Legal Documents

The quest of merging wet and dry code has captivated scholars for decades, predating the idea of smart contracts or blockchain itself. As early as 1980, in the book *Computer Science and Law,* fourteen international experts explored how computers could discover and apply legal norms from written legal sources.[629] There are various reasons why this is a topic with such potential. Law professor Harry Surden has theorized that integrating computable contracts into the legal system can reduce transaction costs and legal fees in contracting. It enables the introduction of analytic and risk management tools, as well as more autonomous, machine-to-machine contracting.[630]

629 Niblett, Brian, "*Computer Science and Law,*" (Cambridge University Press, 30 June 1980), [Author: I did not read this book, and just use it as an example].

630 Surden, Harry, "*Computable Contracts (2012),*" (UC Davis Law Review, Vol. 46, No. 629, 2012), available at SSRN: https://ssrn.com/abstract=2216866, page 688, [Author: summarized the chapter A. Perceived Benefits of Computable Contracting].

How code is developed can be of interest for specific use cases. The European Commission's Directorate-General for Justice and Consumers has observed that the transparency and collaborative participation of developers in open-source projects increase code transparency, facilitate the early identification of bugs, increase the level of security of the code, and facilitate innovation spreading. It believes similar benefits can apply to the legal code.[631] Nearly all the inefficiency and costs of forming and managing legal relationships can be eliminated by adopting the well-established text-handling practices of the open-source software community. Software engineers have perfected these methods for their own use; businesspeople and their advisors can directly adopt and adapt them. In contrast to conventional approaches to standardization, this codification can be done in a decentralized fashion by communities according to their own customs. Ideally, various forms of codification can be integrated into a single system—open-source templates that can be rated, annotated, and commented on.[632]

A document legible to both a court of law and a software application is called a Ricardian contract.[633] Its natural language serves to record matters that cannot be expressed in code; examples include the identification of the parties, general terms and conditions, applicable law, and possibly an explanation of the code's purpose.[634] The original whitepaper, written by Ian Grigg, focused on creating the idea of a specific financial instrument.[635] Beyond this, it primarily coined the term 'Ricardian contract' without establishing formal usage standards.

Since then, scholars have intensely debated how to merge legal language with computer code. While the technological advances within contract-drafting software have plateaued, hope is being placed on the developments in machine learning.[636] Various initiatives, each with creative and distinct approaches, are being theorized and built to finally make Ricardian contracts a reality. James Hazard and Helena

631 EU, "*Modelling the EU Economy as an Ecosystem of Contract - Volume 1 - Feasability Study,*" (European Commission, Directorate-General for justice and Consumers, January 2020), page 88.

632 Ibid., pages 87-89, [Author: summary of various arguments, and edited for readability. I have firsthand information that the main author of this paper, senior economist of the European Commission Harald Stieber, has read and distributed my original whitepaper from 2018, where I suggested this idea. This paragraph might have been inspired by it].

633 "*The Ricardian Contract,*" (Ian Grigg), https://iang.org/ricardian/, accessed on May 7, 2023: "*A Ricardian contract is a document which is legible to both a court of law and to a software application. Its purpose is to provide digital trading systems of various kinds the solidity of legally binding claims on property, so that you and your partners can concentrate on the business opportunity.*"

634 UNOPS (2018), 6.2. Conceivable Legal Manifestations, page 91.

635 Grigg, Ian, "*The Ricardian Contract,*" (Systemics, Inc., 2004), accessed August 12, 2018, http://iang.org/papers/ricardian_contract.html

636 Betts, Kathryn D., Jaep, Kyle R., "*The Dawn of Fully Automated Contract Drafting: Machine Learning Breathes New Life Into a Decades-Old Promise,*" (Duke Law & Technology Review, 2017), page 216.

Haapio argued that three parts of contracts are necessary for full automation and legal enforceability—parameters, code, and prose. They argued that the prose part has, until now, not been handled efficiently. Thus, they proposed 'Wise Contracts,' which rely on templates authored and shared as prose objects.[637] Meng Weng Wong suggested the use of Legalese. It uses symbolic artificial intelligence (AI), which is not AI that ventures a guess when it does not know the answer; it is AI that you are supposed to reason with from first principles. It is deterministic, driven by rule-based reasoning and rooted in formalisms.[638]

Despite these often-well-thought-out ideas, no fully working system exists. The test cases consist primarily of fillable templates producing contracts for specific use cases.[639] There is nothing wrong with this kind of automation, but templates face the same problem as contracts: not all facts are known beforehand. As with contracts, templates are incomplete. Furthermore, these templates are usually developed and owned by a single company, making them available only for their clients and for specific services. This limits their practical use cases. Rather than being open-source tools merging human language and code to create new standards, they are primarily automated improvements on existing processes. The absence of a working universal standard, despite the efforts of many brilliant minds, underscores that this is a hard problem to solve.

The main issue has been, and perhaps will remain, that computers do not *truly* understand human language. Modern large language models such as ChatGPT create the illusion that computers can speak; in reality, they match words based on data. They cannot draw deterministic conclusions from word choice or grasp the subtleties of double meanings. Moreover, they cannot comprehend the evolution of the meaning in words over time or vary their interpretation based on context. They cannot reason based on various conditions or understand anything beyond their dataset and programmed capabilities. Nor can they distinguish fact from fiction in real-world information. Time might solve these problems. If not, these systems still might become good enough to be trusted with certain tasks. Regardless, the technology is not there yet. And there are reasons to believe it never will be.[640]

637 Hazard, James, Haapio, Helena, "*Wise Contracts: Smart Contracts that Work for People and Machines, Erich Schweighofer et al. (Eds.), Trends and Communities of Legal Informatics. Proceedings of the 20th International Legal Informatics Symposium IRIS 2017,*" (Österreichische Computer Gesellschaft, Vienna, 2017), pp. 425–432, available at SSRN: https://ssrn.com/abstract=2925871.

638 "*What is Legalese?,*" (Legalese), https://legalese.com/aboutus, accessed on March 10, 2024.

639 Author: the cited Legalese website provides the following as an example, https://legalese.com/product/start, which is a template system. The other example I found is https://www.trakti.com/why-trakti-en/, which can be considered a contract management system].

640 Bishop, John M., "*Artificial Intelligence is stupid and causal reasoning won't fix it,*"

All problems with merging code and human language become amplified with the use of smart contracts. Adding the rigidity and limitations of smart contracts computed on a global decentralized network to the equation complicates this task significantly. One of the realities of software development is that the fastest means to success is to download existing code and adjust it to your preferences. Even a simple Solidity smart contract from two years ago may not compile on today's blockchain without adjustments.[641] Ethereum constantly updates to new versions, forcing developers to utilize the latest security and programming standards. Contracts consist of endless varieties of words and provisions, including conditions that eliminate or alter previous clauses. Consequently, the potential for bugs is limitless. Even if one were able to align text and code to a certain degree, the next version update (or the one after it) could result in having to start over again.

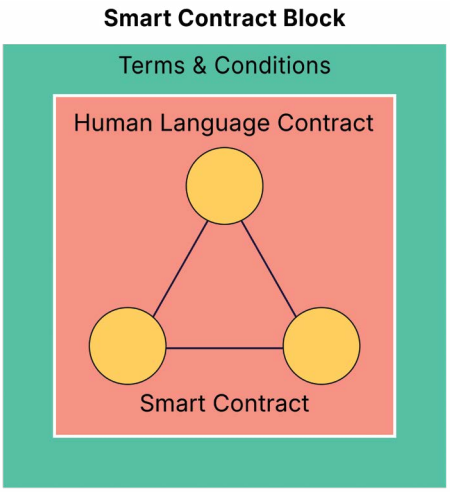
Those trying to solve these issues seem to focus exclusively on the technical angle. But law is a human system, not a technology. Take, for example, tax law. Yes, if you move to the Cayman Islands, you might be able to benefit from income tax exemptions. However, if you do not want to move to the Cayman Islands, developing a smart contract is not a valid alternative. My first conclusion regarding the legality of smart contracts is that code and law are two separate things that cannot merge (at least, not yet). The second is that perhaps we need to develop what we consider law, as opposed to what we consider contract.

The fastest path to legal standardization might not lie in creating code but in developing legal standards that smart contracts voluntarily incorporate. The fastest way to enforceability is to use (global) frameworks already in existence. These ideas are elaborated upon in the chapters on arbitration at the end of Section II and the Decentralized Legal System in Section III. Additionally, a simple method to merge legal contracts and code already exists.

(arXiv:2008.07371v1, 20 Jul 2020), https://doi.org/10.48550/arXiv.2008.07371: Abstract: "*In this paper, foregrounding what in 1949 Gilbert Ryle termed 'a category mistake' [Ryle, 1949], I will offer an alternative explanation for AI errors; it is not so much that AI machinery cannot 'grasp' causality, but that AI machinery (qua computation) cannot understand anything at all.*" Page 32: "*...the three arguments outlined in this paper purport to demonstrate: (i) that computation cannot realise understanding; (ii) that computation cannot realise mathematical insight and (iii) that computation cannot realise raw sensation, and hence that computational syntax will never fully encapsulate human semantics. Furthermore, these a priori arguments pertain to all possible computational systems, whether they be driven by 'Neural Networks', 'Bayesian Networks' or a 'Causal Reasoning' approach.*"

641 Author: I have personally experienced this while using some of the simplest smart contracts, such as those creating NFTs or digital tokens. In fact, it was more likely for a template contract not to compile than to compile successfully.

The Smart Contract Block



There is a simple, often overlooked method to merge a human-language contract (HLC) with smart contracts to form binding agreements. At the start of a HLC, in the section identifying the parties, one can include a hash or link corresponding to the appropriate smart contract. Alternatively, the smart contract could include the legal text in its code. The two parts make up the whole that is stored as one unit.

The next step would be to further simplify the HLC. Transactions like the one in our example require terms and conditions. Major shipping companies such as eBay and Amazon have developed tried-and-tested examples. Similar terms and conditions can act as a legal framework for the HLC, which in turn is linked to a smart contract. This could be called a Smart Contract Block (SCB).

If two parties agree to a transaction, they select a SCB suitable for that transaction. To be binding, the HLC requires transaction-specific variables, such as the parties' names and the shipping address. Upon agreement, both parties sign the SCB with their respective wallets. Once the buyer adds the funds and the SCB is signed, it is stored in its entirety.[642] Using this method makes contract creation easy since the bulk of the clauses governing the SCB are found in the terms and conditions. Independent auditors could certify that the smart contract reflects the HLC, providing courts and arbitrators confidence to rule on them. The complete agreement becomes enforceable by adding a governing law and (arbitration) court, or by subjecting the SCB to a Consensus Jurisdiction (as discussed in Chapter 19).

The main benefit of this approach is standardization, which could especially be beneficial for the millions of small online (blockchain) transactions going on every day. SCBs could become increasingly reliable after being used and tested over time. Users then select the most suitable SCB and fill in transaction-specific details—like choosing an app from an app store! Widely used SCBs that contain a proven enforcement framework could become valuable assets when licensed by their creators. Others might opt for the open-source route. For users, SCBs will be far more cost-effective than uniquely drafted contracts for each transaction. For more complex transactions, specific SCBs with additional variables are possible, as are unique, complex SCBs.

642 Author: the Smart Contract Block could be stored on a public blockchain, privately, or under the authority of a trade organization.

§ 8.5. Summary and Interpretation

Key Takeaways:

- Smart contracts are computer programs that automatically execute predefined conditions on blockchain networks.
- Legal contracts are promises enforceable by law, requiring offer, acceptance, and consideration.
- The incomplete contract theory highlights the difficulty of anticipating future events at the time of reaching the agreement.
- Contracts often involve ambiguities and incomplete terms, relying on courts or arbitrators for interpretation.
- Smart contracts that are immutable once deployed cannot account for real-world complexities and changing circumstances.
- Smart contracts face challenges in enforcement and dispute resolution in many jurisdictions, as they may lack essential attributes of legal contracts.
- Merging human language (wet code) with computer code (dry code) in smart contracts remains a significant challenge.
- Attempts to create fully automated, legally enforceable contracts (e.g., Ricardian contracts) have had limited success (and might not happen soon).
- The future of smart contracts likely involves a hybrid approach, combining elements of traditional legal contracts with blockchain technology.
- A proposed solution is the Smart Contract Block (SCB), which links a human-language contract to a smart contract and includes standardized terms and conditions.
- The SCB approach could lead to standardization and cost-effectiveness for many online blockchain-based agreements.

IX

Tokenization

It was not until I signed the transaction and paid the gas fee that I understood what I had done: nothing. From a technological point of view, I executed a small computer program, like making a calculation in Excel. From a legal point of view, I had done nothing. The smart contracts that created the tokens, whether cryptocurrencies, asset tokens, or NFTs, all had the same lines of code. Moreover, they operated similarly, whether you created one unique token or 10 billion interchangeable ones. Whether transferring a single NFT or 1 billion cryptocurrency tokens between two wallets, the process is the same as well. The simplicity and elegance of these 'tokens' make them a compelling invention. The security provided by the blockchain, the intuitive and easy transactions between free and open-source wallets, the interoperability through universal standards, and the ability to monetize and use these tokens across a vast ecosystem makes them a fascinating concept. Ample token variations exist, allowing a wide array of asset classes to be associated with the blockchain.

What, then, turned tokens into billion-dollar asset classes? What do these tokens represent? What does it mean from a legal perspective to own a token? This chapter addresses these questions.

What are Tokens?

According to Antonopoulos and Wood, the word token means a sign or symbol. It commonly refers to privately issued coin-like items of insignificant intrinsic value, which can be exchanged for specific items or services. Examples are laundry tokens, transportation tokens, chips for the roulette table, and arcade game tokens. Tokens administered on blockchains are blockchain-based abstractions that can be owned, representing all sorts of rights and privileges.[643]

643 Antonopoulos & Wood (2019), Chapter 10. Tokens, page 221.

Tokens can encompass a variety of functions. They can act as currencies, represent investment assets, allow access to digital or physical property, represent equity in an organization, grant voting rights, serve as collectibles or unique identifiers, and provide utility within certain ecosystems.[644] Tokens often allow for multiple functions simultaneously, such as both acting as a currency and allowing votes on the direction of an organization. It is worth repeating that the use of tokens requires a gas fee to pay for the use of the underlying decentralized infrastructure.

Tokens can be fungible or unique. Tokens are fungible when we can substitute any single unit of the token for another without any difference in its value or function.[645] For unique tokens, there is only one of each, and only one account can own or control it. 'Native' tokens represent digital items that are intrinsic to the blockchain. Like tokens, consensus rules govern digital assets. This has a crucial implication: tokens that represent intrinsic assets do not carry additional counterparty risk.[646] As discussed, such tokens form a new asset class with interesting implications for property rights. But tokens represent not only online items on a blockchain; they represent offline assets as well. And then the question of legality comes into play.

§ 9.1. Owning a 'Token'

This author's 2017 investigation into blockchain's legal framework coincided with the peak of the tokenization craze. People believed everything was going to be tokenized, from real estate to shares, from land registries to government debt, and from income streams to entire publicly traded companies. The technology is now established. Why did it not happen?

> *Bob owns a factory and invites a group of potential investors to his house. Buying and selling seashells is all the rage, and he has jumped on the bandwagon. Proudly, he displays a box with fifty seashells. They are beautiful. He tells the investors that if they buy these seashells from him for 5,000 USD each, he can expand his factory. In return, they can benefit from enjoying these seashells and join a wonderful community of seashell owners. The investors are excited; it sounds like a great project! But Alice is not convinced. She asks Bob what rights and duties are associated with the purchase of a shell. Bob pauses for a second; he never thought about this. "Well," Bob says, "they have nice shapes and colors and can be traded on decentralized exchanges in unregulated*

644 Ibid., Chapter 10. Tokens, page 222, [Author: used the list, but provided my own interpretations].
645 Ibid., Tokens and Fungibility, page 223.
646 Ibid., Tokens and Intrinsicality, page 224.

> *markets." One can imagine the investors looking at each other in disbelief. Without a clear contract or an overlaying legal framework--or even a promise—the shells are not tied to any real asset or income. And without Bob conferring actual rights and duties, the investors transfer their money and get nothing in return. Without a legal framework, these shells are worth nothing. Their shape, their color, or that you can hear the ocean in them is irrelevant.*

The above example is a bit extreme, but such misunderstandings about what people think they are buying (or selling) happen daily in crypto. The 'no connection' issue is especially prevalent. After all, tangible assets exist in the real world. They are governed by laws that assign rights and duties. Digital tokens emerge on a decentralized computer. There is no connection between them and the outside world *until* one is established. It is the legal context that assigns real-world rights and duties to tokens on a blockchain. It is the law—which early token enthusiasts eagerly tried to circumvent by 'being decentralized'—that provides meaning to these inventions.

Now then, if you hold a token, does this mean you own the title to a real-world asset? If not, who does? If you transfer a token, do you transfer real rights and obligations? If not, what was transferred? Anyone interested in the real-world utility of their token will have to consider what rights and duties are associated with owning it. There are two ways of formalizing this legal framework, either by contract or by relying on governing laws.

The Swiss Financial Market Supervisory Authority (FINMA) paved the way for token regulation. They did this by classifying tokens based on their economic function, dividing them into payment tokens, utility tokens, and asset tokens.[647] Payment tokens are a means of payment for acquiring goods or services. The holder has no claim on the issuer. The most prominent example is Bitcoin. Utility tokens are intended to provide access to a specific application or service but are not accepted as a means of payment. Asset tokens represent (financial) assets such as a debt or equity claim on the issuer.[648] Asset tokens can promise, for example, a share in future company earnings or future capital flows. In terms of their economic function, therefore, these tokens are analogous to equities, bonds, or derivatives. Tokens which enable physical assets to be traded on the blockchain fall into this category as well.[649]

647 ESMA, "*Own Initiative Report on Initial Coin Offerings and Crypto-Assets,*" (European Securities and Markets Authority, Securities and Markets Stakeholder Group, 19 October, 2018), page 4.

648 Ibid., page 5.

649 Ibid., page 5.

More recently, the EU approved its Markets in Crypto-Assets (MiCA) bill. It classifies crypto assets into three types, which should be distinguished from one another and subject to different requirements depending on the risks they entail. The classification is based on whether the crypto assets seek to stabilize their value by reference to other assets. The first type consists of crypto assets that aim to stabilize their value by referencing only one official currency. Those crypto-assets are defined as "e-money tokens." The second type of crypto-assets concerns "asset-referenced tokens," which aim to stabilize their value by referencing another value or right, or a combination thereof, including one or several official currencies. Finally, the third type consists of crypto assets other than asset-referenced tokens and e-money tokens and covers a wide variety of crypto assets, including utility tokens.[650]

So, MiCA makes a distinction between tokens backed by real-world assets and those that are not. It further establishes various regulatory regimes for tokens depending on their use case. Divisions such as these provide clarity under which (existing) regulatory regime a token falls. Because, contrary to the conviction of the crypto industry that it conceives new products and asset classes, this is not always the case. Rather, the form and not the substance of property rights changes through tokenization. Shares were at one time physical papers sold by a change of hands. Bonds were physical papers with coupons that one clipped and brought to the bank to receive an interest payment in cash. The Internet and computers have, of course, already digitized these practices. In many instances, tokenization is merely a technological innovation for what has already been done.

Regulatory Challenges of Tokens

Regulators are concerned with investor protection. For example, the tokenization of a business venture—like the issuing of stock—is analogous to raising cash with the public. There are rules for public offerings. Due to the existence of a relationship with a real-world asset, tokens offer counterparty risk. After all, one of the parties in a transaction might fail to meet their obligations. If a token represents a share of an income stream, what happens if the title owner sells the asset and moves to the other side of the world? And who will pay the tax bill or comply with regulatory matters? Who provides a fair representation of what rights are conferred by the token?

650 Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (OJ L 150, 9.6.2023, pp. 40–205), page 5, (18).

One persistent claim in the industry is that real-world assets can be tokenized and traded peer-to-peer on the blockchain. This too is not a unique idea; it is known as a bearer instrument. This is normally a certificate, and whoever possesses it owns the underlying asset. As previously discussed, international regulations focus heavily on the prevention of illicit flows of funds. Such regulations could easily be avoided if all that is needed to transfer a company—and all the assets owned by it—is handing over a piece of paper in a private meeting. The way this was dealt with should, by now, be familiar to the reader: international regulators issued recommendations, and the use of bearer instruments was banned in countries such as the U.S.[651] and the UK.[652]

In recent years, there has been an ongoing discussion in the U.S. about whether crypto projects should be regulated as securities. To establish if an asset is a security, the Howey test is applied. This test was established in 1913, and according to the SEC, it applies to digital assets.[653] One characteristic of securities is that they must be registered at a regulated exchange to be lawfully traded.[654] Trading shares outside these exchanges is neither common nor practical. This is at odds with the fully peer-to-peer nature of various blockchains as they currently operate. The SEC, unsurprisingly, often fails to convince the courts of its jurisdictional claim over cryptocurrency projects.[655]

651 *"H. R. 6395—1217, TITLE LXIV—ESTABLISHING BENEFICIAL OWNERSHIP INFORMATION REPORTING REQUIREMENTS – Corporate Transparency Act"* (Fincen, Washington, No date), accessed on March 18, 2025: https://www.fincen.gov/sites/default/files/shared/Corporate_Transparency_Act.pdf: *"SEC. 6402. SENSE OF CONGRESS (5)(E) bring the United States into* ***compliance with inter nationa****l anti-money laundering and countering the financing of terrorism* ***standards****;" "§ 5336. Beneficial ownership information reporting requirements (f) NO BEARER SHARE CORPORATIONS OR LIMITED LIABILITY COMPANIES.—A corporation, limited liability company, or other similar entity formed under the laws of a State or Indian Tribe* ***may not issue a certificate in bearer form*** *evidencing either a whole or fractional interest in the entity."*

652 UK Department for Business, Innovation and Skills, *"Small Business, Enterprise and Employment Act: Companies: Transparency, BIS/15/266,"* (Department for Business, Innovation and Skills, London, 2015): *"UK companies will be prohibited from issuing bearer shares." "Abolishing bearer shares will directly remove an easy means of facilitating illegal activity, and ensure we are* ***compliant with international standards****."*

653 *"Framework for 'Investment Contract' Analysis of Digital Assets,"* (U.S. Securities and Exchange Commission), accessed on March 12, 2024, https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets.

654 *"15 U.S. Code § 78l - Registration requirements for securities (a)"* (Legal Information Institute, Cornell Law School, Ithaca, NY), accessed September 6, 2021, https://www.law.cornell.edu/uscode/text/15/78l *"It shall be unlawful for any member, broker, or dealer to effect any transaction in any security (other than an exempted security) on a national securities exchange unless a registration is effective as to such security for such exchange in accordance with the provisions of this chapter and the rules and regulations thereunder."*

655 Godoy, Jody, *"Ripple Labs notches landmark win in SEC case over XRP cryptocurrency,"*

Immutable and irreversible blockchain transactions result in a range of problems when matched to real-world assets. Consider what would happen if a country moved its land registry to a peer-to-peer blockchain. After a few decades, properties might no longer be transferable because too many people have lost their private keys. Or imagine a real estate project that needs to be demolished to make way for a road. It could end up in regulatory limbo because half the owners are unknown and the other half refuse to transfer. Consider the challenge of dealing with situations where a family's ownership tokens are stolen, and the next day the thief—the new owner—tries evicting them from their own home. And what will happen to claims held on a blockchain when a chain experiences a hard fork?[656] There are now two representations of the same asset.

The conclusion is simple: the ownership rights in most real-world assets cannot be tokenized—at least not in the decentralized way the crypto community imagines. Just as the regulatory world must accept that finance is not going to be restricted to centralized intermediaries, the crypto community has to accept that not everything can be turned into a peer-to-peer traded token. What can be done? As seen with smart contracts, tokens need legal context to be useful off-chain. With the proper legal framework, a place can be reserved for tokens and blockchain technology in more traditional asset classes.

§ 9.2. Asset Tokenization

When Felix Somer, the Swiss banker who was known as the Raven of Zurich, arrived in Vienna at the end of World War I, he found the Rothschild bank in a state of complete helplessness: all its German assets appeared to be lost; its French, English, and American assets had been sequestrated; and there was no news of any assets in Austria outside Vienna. To make matters worse, the remaining assets were at risk. Heavily indebted Austrian banks were plotting to pool their debt with the Rothschild's foreign assets, hiding behind the excuse of fairness under the prevailing communist ideology. Somer proposed the idea of concentrating the still available assets of the Rothschild firm in a private bank to be established in Zurich. After having gotten the approval, he went with a small team to Germany to pick up the assets at the *Reichsbank* in Berlin and the *Diskonto-Gesellschaft* in Frankfurt.

(Reuters, July 13, 2023), accessed July 5, 2024, https://www.reuters.com/legal/us-judge-says-sec-lawsuit-vs-ripple-labs-can-proceed-trial-some-claims-2023-07-13/.

656 "*Hard Fork: What It Is in Blockchain, How It Works, and Why It Happens,*" (Investopedia, updated June 06, 2024), accessed on March 11, 2025, https://www.investopedia.com/terms/h/hard-fork.asp: "*A blockchain hard fork is a change in programming that is incompatible with the old programming. This essentially creates a new blockchain and cryptocurrency.*"

They loaded their car with a pile of sealed securities to such an extent that they had to sit on top of the parcels. What followed was a harrowing trip back to Austria through a Germany undergoing a communist insurgency. An arrest followed at an army checkpoint, which he managed to wriggle out of with one call to the general, with whom he was on friendly terms. Eventually, he managed to hire a private train to drive back to Vienna through the war zone. After collecting the remaining assets, he brought them all to Switzerland and deposited them with the central bank. The remaining assets of the Austrian Rothschild bank ended up being confiscated by the Nazi regime with the German annexation of Austria.[657]

This story, from a time when ownership rights were proved by holding a piece of paper and transfers were made based on a handshake and a reputation, contains lessons that are still relevant today: there can be divergences between owning an asset, legally controlling an asset, and what happens to the asset in the real world.

What Is Tokenization?

According to the OECD, asset tokenization involves the representation of pre-existing real assets on a digital ledger. This is achieved by linking or embedding the economic value and rights derived from these assets into digital tokens created on the blockchain.[658] The tokens issued in the tokenization process exist on the blockchain and represent the rights and value of the underlying assets. The real assets on the back of which the tokens are issued continue to exist in the 'off-chain' world. In the case of physical real assets, those would need to be placed in custody to ensure that the tokens are constantly backed by these assets. Communication between the 'off-chain' (traditional financial market infrastructures) and 'on-chain' environments will be crucial for assets that continue to exist off the chain.[659]

There are two types of assets that can be tokenized. First, there are those that only exist on the ledger and are 'native' on the blockchain. Examples include a wide variety of cryptocurrencies, but there have been tokens issued that represent more complex securities such as equities and debt instruments. The second type includes assets that exist both 'on-chain' and 'off-chain.' These are tokens that are backed by real assets existing outside the ledger. Examples are conventional securities transferred to blockchains, real estate, and commodities. In theory, any

657 Somary, Felix, "*The Raven of Zurich, The Memoirs of Felix Somary - With a Preface by Otto von Habsburg,*" (C. Hurst & Company, London, St. Martin's Press, New York, 1986): "*Chapter 28. Banking in Zürich, 1919-1926,*" *and* "Chapter 43. Harbingers of the Second World War; the Occupation of Austria, 1938."

658 OECD, "*The Tokenisation of Assets and Potential Implications for Financial Markets,*" (OECD Blockchain Policy Series, Paris, 2020), page 11.

659 Ibid., page 11.

asset can be tokenized.[660] The issuance of tokens backed by fiat currencies, which is one form of 'stable coins,' has rapidly increased. Many stablecoins have been issued, and their market capitalization is growing. Real assets that are being tested in pilots or at the concept stage involve real estate and commodities such as gold or art. Intangible assets, such as intellectual property, could also be tokenized, creating innovative digital assets and markets.[661]

The main selling point of digital tokens is disintermediation and the elimination of the need for trusted parties to facilitate transactions. In the case of tokenization of real assets, though, it is unlikely that it can be done without a trusted and credible central authority holding such assets in custody. As the OECD explains, a central party will need to guarantee the connection of the off-chain world to the distributed ledger environment, ensure that the digital representation of the asset on the ledger is unique, and ensure that the same asset is not being represented by multiple tokens in multiple platforms.[662]

Tokenizing Real Estate

Real estate has often been touted as an opportunity for the issuance of tokens. It is particularly interesting because it has at least two major components that are candidates for tokenization: property ownership and rental income. With the first component, a title deed would be tokenized. The second component would result in more of a financial product, entitling holders to an income share. It is no surprise that projects for the tokenization of real estate have been underway in Russia, the U.S., and France.[663]

To explore this idea further, it is worth examining the work carried out by DLA Piper in Hong Kong. They set out to develop a tokenizing platform for real estate and addressed the regulatory issues that arose along the way. As a first benefit, they argued that tokenized real estate can unlock liquidity. Normally, real estate buying and selling remains a restricted market, mainly due to the high investment amounts required. Optimized trading platforms could allow for faster and cheaper transactions in both primary and secondary markets. This infrastructure would allow for market expansion into sections previously unattainable for real estate projects. Finally, when all of this is done through a blockchain, it would reduce reporting and transaction costs.[664]

660 Ibid., page 13, [Author: paragraph summarized from image].

661 Ibid., page 11.

662 Ibid., page 35.

663 Ibid., Tokenising real estate: Russia, the United States and France, page 51.

664 "*Real estate tokenization and the potential benefits of reassessing the limited partner structure,*" (DLA Piper, 9 November, 2020), accessed on March 12, 2024, https://www.dlapiper.com/en-us/insights/

DLA proceeded to sum up that for this project to succeed, multiple of different parties are likely needed. First, there needs to be a sponsor, typically someone who initially purchases the real estate. Next, there would need to be a digital transfer agent who is required to issue and manage digital assets and who facilitates the change of ownership between two investors. This entity could double as the custodian of the real estate. Next, a compliance partner is needed to perform due diligence on clients. If needed, an exchange can be built where the tokens can be traded by participants.[665]

DLA observed that this kind of tokenization of real estate involves various regulated activities. First, there is the issuing of tokens, which qualifies as a lower-risk securities offering. In general, such an offering can only be made to investors who have the right to acquire these assets, which in this case are those qualified as professional investors. There are further regulations that apply to those holding third-party assets in custody and to those offering an exchange facility for the tokens. As a solution, they created a permission-controlled environment: a platform where investors who have gone through due diligence can log in and buy or sell the tokens to other registered users. The real estate is placed in a holding company, and a variety of rights can be assigned to investors depending on the goal of the project. Within this framework, there is significant legal freedom to structure investment contracts as desired, whether for acquisition, entitlement to a revenue stream, or a capital gains plan.[666] There is, however, no freedom to set it up as a decentralized or peer-to-peer project.

Tokenization of Company Shares

Securities offer another interesting area of promising possibilities. As observed by the OECD, the electronification of financial markets and the use of automation for issuing and trading financial instruments is not new. Securities have existed in electronic-only format for a long time in what is described as a 'dematerialized' form.[667] Tokenized securities could be seen as a form of cryptography-enabled dematerialized securities that are based and recorded on a decentralized ledger, instead of electronic book entries in the securities registries of central depositories. According to the OECD, the ability to automatically transact and settle without

publications/2020/11/breaking-new-ground-fall-2020/real-estate-tokenization-and-the-potential-benefits-of-reassessing-the-limited-partner-structure, [Author: edited for readability].

665 Ibid.

666 "*DLA Piper and Aldersgate DLS launch TOKO,*" (DLA Piper Youtube channel), accessed May 9, 2023, https://www.youtube.com/watch?v=NxMbugzLhXc, [Author: made a summary, and a few assumptions].

667 OECD, "The Tokenisation of Assets and Potential Implications for Financial Markets," (2020), page 14.

trusted intermediaries may be where most of the disruptive potential of tokenization lies. Tokenized securities eliminate intermediaries or proxies in the distribution of dividends or votes, giving investors full control of the equity they own.[668]

The lessons learned from real estate tokenization apply to securities as well and for the same reasons. Within the current regulatory framework, it is unlikely to see peer-to-peer trading of security tokens. However, tokenized beneficial ownership of securities held through a third-party account is not different from how the world currently buys and trades shares. In 2021, a group of users of the social media platform Reddit discovered that hedge funds were 'naked-shorting' a company called GameStop. What sparked their attention was that there were more shares sold short than existed. They devised a plan to buy up all the available shares and drive up the price. As a result, the short sellers would be forced to close their positions by buying shares on the open market, further driving up the price. This would force a short squeeze because there were not enough shares to go around. The plan worked. A swarm of small investors moved in, causing the price to rise. More 'investors' piled in, and a sense of financial revolution filled the air. The hedge funds quickly amassed billions of USD in losses. As a result, regulators allowed stockbrokers to interfere by disabling the buy button for retail investors. The bubble popped, and the momentum turned against the retail investors. This prevented the hedge funds from being wiped out, thereby reducing the risk of wider contagion in the financial system. But that was not the end of it...

The Reddit crowd did not give up and started digging more into what had happened, interviewing former regulators and whistleblowers and reading all the fine print. They learned what was explained earlier in the chapter on property rights: whenever we buy stocks through a brokerage account, we do not buy the stock itself but merely a claim on the stock—a form of beneficial ownership. What's more, they discovered that most stocks are owned by large hedge funds that hold their shares in what are known as dark pools. This allows these hedge funds to take a cut from all trades by routing them through a system called 'payment for order flow.' Furthermore, there were concerns that through these dark pools, hedge funds and market makers could sell the same shares multiple times. This suspicion was confirmed by analyzing shareholder voting, which revealed that in many listed companies, the votes outnumbered the shares. Hedge funds not only use the retail investors' own shares to bet against them, skim off the top, and manipulate prices, but these insiders also influence publicly traded companies through vote manipulation as well.[669] To combat this blatant corruption and market manipulation, the Reddit

668 Ibid., page 14.

669 "*Market Literacy - A bare-bones site to catch you up to speed,*" (Market Literacy.org), accessed on March 15, 2024, https://www.marketliteracy.org/, [Author: this is a community

crowd moved to directly register their shares, which is a more direct form of holding shares that cuts out the brokerage firms.[670] At the time of writing, this story is still unfolding.

After understanding the workings of the world's largest stock markets, it is easy to imagine how tokenization could help protect the rights of investors. As the OECD summarizes, tokenization could result in efficiency gains through faster, cheaper, and frictionless transactions; reduced costs of issuance and administration; protection of corporate actions such as dividend payments and voting; shortened custody chains; and increased transparency on transactions and ownership.[671] Blockchains and similar technologies can be a significant improvement to the current clearing and settlement procedures of assets,[672] and they can create a clearer record of legal and beneficial ownership.[673]

On the flip side, the use of blockchain technology might introduce additional issues. For example, who gets to ensure the data collected on-chain is correct? Especially considering the technical issues and the finalized nature of transactions with blockchain technology. But another major downside of blockchain technologies is the absolute zero room that is allowed for even the smallest of errors. It is heartbreaking enough to read stories of people who lose their life savings because they forgot their seed phrase or authorized a malicious smart contract that drained their wallets. But it is hard to imagine a shareholder registry of *Apple Inc*. or T*oyota Motor Corp.* being compromised because of stolen access keys. Such blockchains will need to have a central registry for amending errors that have slipped onto the

supported overview. The official sources seem to not get what is truly are at stake, or wisely ignore it].

670 "*Becoming a registered shareholder in US-listed companies through Computershare,*" (Computershare, United States), accessed on March 15, 2024, https://www.computershare.com/us/becoming-a-registered-shareholder-in-us-listed-companies.

671 OECD, "*The Tokenisation of Assets and Potential Implications for Financial Markets,*" (2020), page 18, [Author: summarized from image].

672 Ibid., page 32: "*DLT-enabled systems and the use of smart contracts for clearing and settlement of tokenised assets have the ability to verify ownership, confirm trade matching and record transactions in an automated, immutable, transparent and near-immediate way. The distributed ledger can act as a decentralised registry of data on transactions, and a counterparty to all transacting parties.*"

673 Ibid., page 32: "*Enhanced efficiency could also be driven by the fact that legal and beneficial ownership in DLT-based clearing and settlement systems is not be split between investors and nominees. In a typical case of a traditional security settlement, the investor will be recorded as beneficial owner, while the nominees/brokers will be listed as the legal owner in the ownership records of the CSD (Allen & Overy, 2018). The use of DLTs for clearing and settlement reduces the number of intermediaries involved and streamlines the process of paying or delivering securities to the ultimate beneficial owners.*"

chain, defeating the purpose of using a blockchain in the first place (at least, a decentralized one).

As the OECD rightly points out, current market structures distribute risk through various participants that operate as 'shock absorbers.' These structures mitigate the risks of extreme volatility for which crypto markets have become known. A fully tokenized system would have little defense against herd behavior, and tokenization could have significant consequences on the wider financial system, such as on derivatives.[674] Tokenization could affect market liquidity both positively and negatively. While it could help illiquid assets find bids, maintaining stable, functioning markets with regular trading requires sufficient liquidity depth,[675] which is normally provided by market makers. As another benefit, the OECD argues that the transparency and traceability of tokenized assets might mean they could work well as collateral.[676] However, we have seen how current collateral-based market structures erode property rights.

Having said all that, tokenization projects have already been undertaken. One example is the tokenization of the shares of Swiss company Mt Pelerin, in compliance with the Swiss regulatory framework. Essentially, Mt Pelerin's shares never existed in certificated form: they were issued in book entry form and then recorded and linked to tokens.[677] They launched an open-source, multi-chain platform for managing digital securities where projects can be uploaded and managed. This platform facilitates compliance and corporate actions and the issuance, distribution, and transfer of shares.[678] To trade here, one needs a regular account. For the reasons previously mentioned, there is no peer-to-peer trading in these stocks.

RWA Tokenization

Real-world asset (RWA) tokenization has recently gained popularity, attracting not only the imagination of crypto investors but also the world's largest financial firms. Even BlackRock unveiled its first tokenized fund issued on a public blockchain, providing qualified investors with the opportunity to earn USD yields.[679] According to enthusiast Natalia Karayaneva, RWA tokenization converts the rights of diverse

674 Ibid., page 27.

675 Ibid., 3.2. Liquidity implications, page 28.

676 Ibid., page 26.

677 Ibid., page 15.

678 "*Shares tokenization,*" (Mt. Pelerin), accessed on March 12, 2024, https://www.mtpelerin.com/shares-tokenization.

679 "*BlackRock Launches Its First Tokenized Fund, BUIDL, on the Ethereum Network,*" (Securitize.io, Mar 21, 2024), accessed on Aug 16, 2024, https://securitize.io/learn/press/blackrock-launches-first-tokenized-fund-buidl-on-the-ethereum-network.

assets, from bonds and equity to real estate and cultural assets, into blockchain-based digital tokens. This innovation promises enhanced liquidity, evidence of ownership, and transparency, aimed at democratizing traditionally inaccessible investment avenues.[680] In short, RWA tokenization is not much different from the tokenization already discussed. This would be great if combined with a more decentralized stock market structure. Or to provide investors with an opportunity to invest in assets they cannot afford or maintain alone.

Attentive readers will recognize that there are massive risks to financial freedom if RWA tokenization becomes widespread. RWA tokenization centralizes asset ownership with financial institutions, which then issue tokens for investors to buy. Instead of owning an asset directly, one owns a token, often with only a fraction of the original ownership rights (primarily economic rights). Furthermore, in the current regulatory environment, access to this system could only happen through, and with the approval of, regulated intermediaries. Consequently, ownership would become conditional to the directives of (international) regulators.

> *Bob wants to invest in real estate. He plans to visit his cousin Carol, a real estate agent. On the way there, he runs into Alice, who tells him about tokenized real estate. This allows him to have his ownership rights recorded on an immutable blockchain. Bob is excited and invests. He loves tech and being part of the future! Had Bob gone to Carol, he would have now owned real estate after paying her a commission. Now Bob owns a token, and Alice owns the real estate while charging Bob an annual fee. When Bob wants to sell some tokens to cover for a medical emergency, his transaction is flagged by Alice's compliance department. His funds are now frozen.*[681]

§ 9.3. Non-Fungible Tokens

One of the more recent trends in crypto surrounds non-fungible tokens (NFTs). Contrary to fungible tokens, an NFT represents a unique token—and ownership

680 Karayaneva, Natalia, "*BlackRock's $10 Trillion Tokenization Vision: The Future Of Real World Assets,*" (Forbes, March 21, 2024), accessed on Aug 16, 2024, https://www.forbes.com/sites/nataliakarayaneva/2024/03/21/blackrocks-10-trillion-tokenization-vision-the-future-of-real-world-assets/, [Author: $10 trillion USD is the total valuation of Blackrock. The fund has raised about $500 million USD and invested it in tokenized US treasuries].

681 Author: this example exaggerates the challenges of indirect ownership to make a point. In real life, these arrangements are relatively common. Many investors prefer investment products that give them exposure to real estate investments without having to deal with tenants, regulations and maintenance.

of this token can be proved with digital signatures on a blockchain.[682] NFTs thus present a unique form of digital ownership, which in turn can be tied to a wide variety of assets and ownership rights.

NFTs can be used in gaming, where they represent unique items or characters. Organizations can use NFTs for record-keeping and identity verification purposes. Intellectual property is another field that is explored in relation to NFTs, with art, songs, and patents being committed to the blockchain. Additionally, NFTs can be tied to financial products such as invoices and warrants.[683] Entry tickets, loyalty programs, KYC procedures, humanitarian aid, supply chain tracking, and voting rights in decentralized organizations all provide use cases for NFTs.

Given that NFTs are based on open-source smart contracts, there is freedom in how they can be structured. A smart contract can include features such as allocating a percentage of each subsequent purchase price to the original creator. Creators can include restrictions on how buyers can sell the NFT or to whom they can sell it. These features provide creators with the freedom to monetize their assets and ideas effectively.[684]

One fundamental question behind every token sale remains: what exactly is the buyer purchasing? Unfortunately, the challenges of tokenization of off-chain assets apply equally to assets that are *perceived* as being decentralized. The collectible image NFT serves as a prime example. Each unique token represents one unique image, with simple JPEGs of monkeys and CryptoPunks selling for millions of dollars.[685]

NFT Legality

Image NFTs represent pieces of art. Copyright laws govern the creation and publishing of art. The fundamental principle of these laws maintains that the creator holds all rights to their work. Copyright is protected by law and is inherent in the creation of a work. Copyright laws do not require opinions, form-filling, or notifications. Therefore, copyright notices primarily serve to clarify ownership of the

682 Antonopoulos & Wood (2019), ERC721: Non-fungible Token (Deed) Standard, page 247.

683 Krzisnik, Mina, "*Non-Fungible Tokens — From a Legal Perspective,*" (Medium, Feb 26, 2019), https://medium.com/the-capital/non-fungible-tokens-from-a-legal-perspective-51de03ea0b06, accessed on May 16, 2023.

684 Author: I explored these various options when I learned how to create NFTs.

685 Wang, Tracy, "*Sotheby's Auction of 101 Bored Ape NFTs Fetches $24M, Smashing Estimates,*" (Coindesk, Updated May 11, 2023), accessed on Dec 12, 2024, https://www.coindesk.com/markets/2021/09/09/sothebys-auction-of-101-bored-ape-nfts-fetches-24m-smashing-estimates.

copyright—they are not required for copyright protection. These laws automatically apply to all creations, regardless of the creator's interest in copyright protection.

There is no such thing as an 'international copyright' that automatically protects an author's writings throughout the world. Protection against unauthorized use in a particular country depends on the national laws of that country. However, many countries offer protection to foreign works under certain conditions that have been greatly simplified by international copyright treaties and conventions.[686]

The main convention for international copyright is the Berne Convention for the Protection of Literary and Artistic Works. This international agreement, first accepted in Berne, Switzerland, in 1886, governs copyright issues across participating nations. Its primary purpose is to ensure mutual recognition of copyrights among member countries. Regarding protected works, the convention states that protection must cover "every production in the literary, scientific and artistic domain, whatever the mode or form of its expression."[687] According to the convention, the following rights must be recognized as exclusive to the producer: to translate, to make adaptations and arrangements, to perform in public, to communicate to the public, to broadcast, to make reproductions, and to use the work as a basis for an audiovisual work.[688]

In addition to the Berne Convention, there is the World Intellectual Property Organization (WIPO) Copyright Treaty for the protection of works in the digital environment. It grants authors additional economic rights, most notably including the rights of distribution and rental, as well as a broader right of communication to the public. It further expands copyright protection to computer programs and databases.[689]

As a result of these governing laws, anyone wishing to use a copyrighted work must obtain a license to do so. Alternatively, copyrights, like other assets, can be sold. The sale of such assets, however, must meet specific requirements. In the U.S., for example, such transfers need to be formalized in an instrument of conveyance and signed by the owner.[690]

686 U.S. Copyright Office, "*Circular 38A - International Copyright Relations of the United States,*" (U.S. Copyright Office, Washington, REVISED: 11/2023), https://www.copyright.gov/circs/circ38a.pdf, page 1.

687 "*Berne Convention for the Protection of Literary and Artistic Works (as amended on September 28, 1979),*" (Wipo, Geneva, Switzerland), accessed on March 12, 2024, https://www.wipo.int/wipolex/en/text/283698: Article 2(1)

688 "*Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886),*" (Wipo).

689 "*Summary of the WIPO Copyright Treaty (WCT) (1996),*" (Wipo), accessed on May 16, 2023, https://www.wipo.int/treaties/en/ip/wct/summary_wct.html

690 U.S. Copyright Office, "*Circular 12 - Recordation of Transfers and Other Documents,*" (U.S.

With this understanding, we can examine the challenges copyright law presents to image NFT sales. Firstly, the creators of the images, no matter how simple, own the intellectual property (IP). They then store the image on a decentralized server. However, this process merely stores a copy of the image; it does not transfer ownership rights: these remain with the creator! A vital question is then raised: what does one buy? In essence, one buys a unique token containing a hyperlink to a decentrally stored image owned by someone else. As mentioned, conferring rights requires a legal framework.

One of the earliest NFT creators was an organization called Dapper Labs, a Canadian firm that had success with an NFT project called CryptoKitties. The company established an NFT license in an effort to resolve IP rights issues. It clarified that NFT buyers purchase a license to the content, not the copyright itself. This first NFT license agreement, however, was extremely one-sided and granted NFT holders almost no rights.[691] Since then, the license has been updated to version 2.0, granting token holders certain rights.[692] Regrettably, various later projects, such as an NFT collection called CryptoPunks, copied the first attempt by inexperienced pioneers. Only after a company called Yuga Labs acquired the ownership rights to this NFT collection did they issue a proper license granting useful rights to token holders.[693] Yuga Labs had already made a licensing agreement when creating their famous NFT collection, the Bored Ape Yacht Club. They assured at least a clear set of rights associated with the purchase of an NFT.[694]

The main conclusion is that NFTs in their current form are not fully decentralized assets; a single 'person' owns the entire collection. NFTs primarily derive value from properly structured licensing rights for token holders. Because open protocols allow for substantial customization, each NFT can represent unique assets or rights.

Copyright Office, Washington, revised: 09 / 2016), accessed on March 20, 2025, https://www.copyright.gov/circs/circ12.pdf, page 2. *"A transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance (for example, contract, bond, or deed) or a note or memorandum of the transfer is in writing and is signed by the owner of the rights conveyed or the owner's duly authorized agent. See 17 U.S.C. § 204(a)"*

691 Author: I have read the first version of the license but did not make a backup. I searched for it in 2024, but could not find it. I inquired with Dapper Labs if the license can still be found online, but the person replying was not aware of the previous licensing arrangement. The terms and conditions of this and other NFT collections have been updated since.

692 "*NFT License, Help define what ownership means in blockchain,*" (Dapper Labs, Version 2.0, Last Revised: November 5, 2018), accessed on March 13, 2024, https://www.nftlicense.org/.

693 Exmundo, Jex, "*A New CryptoPunks License Is Finally Live. Here's Why It Matters,*" (NFT now, August 16, 2022), accessed on March 13, 2024, https://nftnow.com/features/a-new-cryptopunks-license-is-finally-live-heres-why-it-matters/

694 "*LICENSES, Here find all the information about the license terms of BAYC, MAYC, adn HV-MTL collections,*" (Bored Ape Yacht Club, Yuga Labs LLC), accessed on March 13, 2024, https://boredapeyachtclub.com/licenses/bayc

As a result, token holders often do not understand exactly what rights and duties have been conferred to them (if any). This particularly applies to complex IP asset structures, such as the sale of virtual land and buildings in the metaverse. In the end, token holders' rights and duties depend on the terms and conditions provided by the owner of the underlying asset.

§ 9.4. Token Standards

While smart contracts offer flexibility, tokens come in several standard technical variations. The main reason for these standards is the need for wallets to transfer tokens. Using an open-source standard ensures compatibility with widely used open-source wallets.

Using Ethereum as an example, the standard token, ERC20, is by far the most popular and widely used standard interface for creating simple fungible (or interchangeable) tokens. With it, developers and entrepreneurs can build tokens that interoperate within Ethereum's ecosystem.[695] For the creation of NFTs, there is the ERC721 token format. This standard framework offers only a basic NFT, requiring developers to code specific details and asset connections into the smart contract.

Another variation is the ERC1400, which allows for the creation of tokens for securities in a regulated environment. It introduces regulatory requirements typically absent in fully decentralized environments. These include KYC wallets with holding limits, transaction thresholds, whitelists, restrictions, and the ability to reverse or force transfers for regulatory compliance or anti-fraud measures.[696] There are, of course, other token variations for other use cases, and anyone is free to design and propose their own standards.

§ 9.5. Summary and Interpretation

Tokens are blockchain-based abstractions representing various rights and privileges. Tokens are technologically simple, but their real-world value and legal implications are complex and often misunderstood.

695 "*Lesser-Known ERC Tokenization Standards On Ethereum,*" (Cryptopedia, December 23, 2021), accessed on May 17, 2023, https://www.gemini.com/cryptopedia/ethereum-token-standards-erc777-erc1155-erc223-erc1337

696 CINDX, "ERC-1400: *New Token Standard that can Bridge the Gap between Crypto and Fiat Securities,*" (Medium, Sep 21, 2018), accessed on May 17, 2023, https://medium.com/cindx/erc-1400-the-new-token-standard-a5a49779554e

Tokenization is the process of linking or embedding the economic value and rights derived from pre-existing real or digital assets into tokens on a blockchain. Tokenization can be applied to a wide range of assets, including real estate, securities, commodities, IP, and fiat currencies.

Key Takeaways:

- There is much misunderstanding about the ownership rights associated with tokens.
- Only a private or public legal framework can assign rights and duties to tokens.
- Regulatory frameworks divide tokens based on the rights and duties associated with them. Examples of such a division are payment tokens, utility tokens, and asset tokens.
- Modern regulations prohibit bearer instruments and the peer-to-peer trading of assets.
- Tokenization requires intermediaries to hold the assets. This contradicts decentralization.
- Real estate tokenization unlocks liquidity and expands market access but requires custodians to hold the asset. With tokenization, you own a token, and someone else owns the property.
- Legally speaking, a securities token differs little from a modern security. The technology could improve efficiency, transparency, and investor control.
- Real-world asset (RWA) tokenization is gaining popularity but centralizes asset ownership with a few financial institutions. This ensures that ownership of assets becomes conditional on the directives of (international) regulators.
- Non-fungible tokens (NFTs) represent unique digital ownership but often lack clear legal rights for token holders.
- Copyright laws pose challenges for NFT sales, as the original creator retains ownership rights. The rights associated with NFTs depend on properly structured licensing granted by the real asset owners.
- Token standards like ERC20, ERC721, and ERC1400 provide frameworks for creating different types of tokens with varying functionalities.

X

Decentralized Finance (DeFi)

Decentralized finance (DeFi) is a collective term for financial products and services that are built using blockchain technology and are accessible to anyone with a wallet and an Internet connection. It is an open and global financial system built for the Internet age—an alternative to a financial system that is opaque, tightly controlled, and held together by decades-old infrastructure and processes. It is based on open-source technology that anyone can program with and use to create products that let you borrow, save, invest, trade, and more.[697]

A large number of products and services make up the DeFi ecosystem. However, there are several main categories. The first one is *stablecoins*, which aim to maintain a constant token value relative to the U.S. dollar or other major fiat currencies. Stablecoins often function as liquidity and trading pairs in DeFi services. *Decentralized exchanges* allow users to trade one digital asset for another, often through a decentralized order book or by matching orders and setting prices algorithmically. *Credit* can be provided through time-limited, interest-bearing instruments that must be repaid at maturity, with DeFi facilitating the matching of lenders and borrowers. Even *derivatives* such as futures and options are found in DeFi, as are insurance and asset management tools.[698] In addition, there are auxiliary services that support DeFi activity but are not themselves financial services. The most prominent are oracles. Other auxiliary services include wallets, data storage, data queries, identity verification, and arbitration.[699]

A DeFi protocol, service, or business can be recognized by trust-minimized operation and settlement, meaning that security is provided by blockchains and

697 "*Decentralized finance (DeFi),*" (Ethereum.org), accessed on May 17, 2023, https://ethereum.org/en/defi/

698 Gogel, David, et al., "*DeFi Beyond the Hype – The Emerging World of Decentralized Finance,*" (Wharton, University of Pennsylvania, May 2021), DeFi Service Categories, page 8

699 WEF, "*Decentralized Finance (DeFi) Policy-Maker Toolkit, Whitepaper,*" (World Economic Forum, Geneva, Switzerland, June 2021), 1.3 DeFi service categories, page 11.

smart contracts, as opposed to a third party. DeFi has a non-custodial design, meaning that the decentralized protocol itself facilitates transactions and no trusted counterparty or market maker is needed. DeFi consists of programmable, open, and composable architecture, meaning anyone can build on top of the existing infrastructure.[700] In summary, DeFi offers an integrated and adjustable financial system, using a wide variety of tokens, publicly available smart contracts, various blockchains and wallets, and decentralized governance systems. It even integrates data feeds from sources off the blockchain through oracles.[701]

DeFi uses a variety of financial incentives to promote market development, including the creation of liquidity for trading and collateral for the provision of credit. Yields are paid from a share of trading fees to those locking up digital assets to serve as liquidity or collateral for a specific service. At the same time, liquidation fees can be charged by market makers over under-collateralized loans.[702] These incentives lead to concepts such as yield farming, which optimizes returns from liquidity by automatically moving funds across DeFi services in search of the highest yield. This capital provision directly supports DeFi activities, increasing network value, with some value returning to liquidity providers.[703]

The discrepancy between asset ownership and the ownership of tokens discussed in the previous chapter applies less to DeFi, as assets exchanged in DeFi generally exist on-chain. This allows for the creation of new categories of tokens and NFTs. For example, interest-bearing bonds on on-chain assets could be tokenized, given that these are bearer assets on which no ownership information is recorded and whose possession accords ownership.[704]

In practice, anyone with a common wallet like MetaMask can directly connect to public smart contracts and access various financial services without intermediaries. DeFi gives users full control over system access, offers transparency in fees and market activity, and provides instant access to a global marketplace. Insolvency risks are minimized, as smart contracts execute automatically following predetermined parameters. As a result, DeFi applications have the potential to provide benefits in terms of speed of execution and transaction costs, driven by the efficiencies produced by technological innovation and disintermediation of third parties, the

700 WEF, *"DeFi,"* (2021), page 6. [Author: added my own clarifications].
701 Gogel et al. (2021), DeFi Building Blocks, page 2-3.
702 WEF, *"DeFi,"* (2021), Box I - DeFi incentive systems, page 10
703 Gogel et al. (2021), Incentive Structures and Governance, pages 5-6.
704 OECD, *"The Tokenisation of Assets and Potential Implications for Financial Markets,"* (2020), page 15.

latter being replaced by smart contracts. DeFi offers easier and cheaper access to financial services and stimulates open-source innovation in financial services.[705]

At the same time, the decentralized nature of DeFi and the irreversibility of blockchain transactions introduce a list of risks for users. There can be financial risks such as liquidity issues, especially in times of market stress, resulting in flash crashes and uncontrolled liquidations. Technical issues may arise from faulty smart contract code, interoperability problems, or oracle failures. And protocol failures can be introduced during regular software updates or forks or because of a failure in governance systems.[706]

Despite its rapid growth and development, DeFi is still at an early stage. Much of the activity to date is highly speculative and targeted at existing digital asset holders. Returns are likely to compress over time. Creating leverage for digital asset purchases and profiting from various incentive mechanisms appear to be the most common motivations for participation. The user experience of most services is still not optimized for mainstream retail market participants. The system remains relatively untested at scale. Hacks and other attacks to drain funds are disconcertingly common. The Ethereum blockchain, which supports the vast majority of current DeFi activity, faces high fees and major scalability challenges. Further market development will require significant improvements across these and other areas.[707]

DeFi Regulation

Regulators have taken notice of DeFi's peer-to-peer nature. Numerous DeFi applications are involved in non-compliant provision of regulated financial services and products, activities often reserved only for licensed entities.[708] In fact, some of the characteristics of DeFi may be incompatible with existing regulatory frameworks, particularly given that the current framework is designed for a system that has financial intermediaries at its core.[709] From the perspective of the regulator, DeFi applications give rise to consumer risks and other regulatory risks. These include the potential for nearly unlimited leveraged trading and financial stability vulnerabilities. In addition, DeFi lacks traditional investor protection safeguards and market integrity checks to protect from fraud and market manipulation. DeFi

705 OECD, "*Why Decentralised Finance (DeFi) Matters and the Policy Implications,*" (OECD, Paris, 2020), page 10, [Author: edited for readability]

706 WEF, "*DeFi,*" (2021), Chapter 2, Risks, [Author: made summary of the chapter].

707 Gogel et al. (2021), page 8.

708 OECD, "*DeFi," (2020)*, page 11.

709 Ibid., page 12.

enables regulatory arbitrage and poses risks of money laundering and terrorist financing.[710]

In the view of the OECD, the regulators' primary concern is the absence of a single point that can be held responsible for the operation of a DeFi protocol, which makes regulatory compliance and the enforcement of regulation difficult.[711] Regulators might try to 'recentralize' DeFi to get some comfort from a regulatory and supervisory standpoint. Regulatory access points could be the holders of controlling shares of governance tokens, the parties profiting from DeFi protocols, or those holding the admin keys.[712] Most so-called decentralized exchanges and trading platforms are operated by a central actor that sets up the interface of the platform and the order book.[713] Regardless, regulatory tools applicable in centralized settings may need to be redesigned to be made interoperable and compatible with decentralized structures.[714]

Investor Protection Code

The reality is that in most cases when an organization handles or stores other people's money or assets, a license is needed. This requirement has been a longstanding, global practice. As mentioned, intense debates have occurred in the U.S., the largest crypto market, over whether cryptocurrency markets should be regulated as securities. But what problem do securities regulations solve? According to the Corporate Finance Institute, originally, securities laws were aimed at correcting the wrongdoings that led to the exploitation of the public during the era leading up to the Great Depression. The wrongdoings included insider trading, the sale of fraudulent securities, secretive and manipulative trading to drive up share prices, and other acts that financial institutions and professional stock traders engaged in to the disadvantage of ordinary individual investors.[715]

710 OECD, "*DeFi," (2020)*, page 10, [Author: edited for readability].

711 OECD, "*The Tokenisation of Assets and Potential Implications for Financial Markets,*" (2020), page 30.

712 OECD, "*DeFi," (2020)*, page 58.

713 OECD, "*The Tokenisation of Assets and Potential Implications for Financial Markets,*" (2020), page 30.

714 OECD, "*DeFi," (2020)*, page 58.

715 "*The 1933 Securities Act,*" (Corporate Finance Institute), accessed at March 13, 2024, https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/1933-securities-act-truth-securities/ : "*President Roosevelt stated that the law was aimed at correcting some of the wrongdoings that led to the exploitation of the public. The wrongdoings included insider trading, the sale of fraudulent securities, secretive and manipulative trading to drive up share prices, and other acts that some financial institutions and professional stock traders engaged in, to the disadvantage of ordinary individual investors.*"

In at least certain aspects of DeFi, open-source protocols now provide services traditionally offered by institutions—replacing complex, fallible legal arrangements with math, cryptography, and code. As we learned in the chapter about smart contracts, these can be stored in a decentralized and immutable manner and can be operated by anyone by interacting with them. It is likely that from the multitude of protocol ideas and innovations, those that prove predictable and secure will emerge as dominant. Once established, investors do not need protection from them. While traditional financial products consist of claims on third parties, blockchain-based tokens permit users to exchange their assets directly without intermediary risk. Facilitating the free interaction with proven software protocols can be considered a form of wise rule. In this scenario, a regulator's role might be limited to verifying code security, although a private party can provide such a service as well.

It is true that certain DeFi activities place investors at the same risk level as those for which security regulations were introduced. Others do not. Regulators must recognize that technological advancements have made their services obsolete in certain areas. The crux, as emphasized throughout this book, is that the legal system has shifted from providing a framework of equally distributed rights and duties to a system that primarily enforces policy objectives. Ironically, these regulatory practices are precisely what the latest generation of investors seek protection from in Bitcoin and DeFi.

The foundation of our legal system supports lawful interactions between individuals, regardless of contemporary fancies. Laws can protect individuals from others but not from themselves. Most DeFi protocols are based on open-source code anyway. They can be forked and used by anyone who wants to use them. The cat is out of the bag. In some form or shape, DeFi is here to stay. Now is a perfect time to reestablish and formalize financial liberty to support the increasingly interconnected and decentralized economy of the twenty-first century.

§ 10.1. Summary and interpretation

Decentralized finance (DeFi) is a blockchain-based financial ecosystem accessible to anyone with a wallet and Internet connection. DeFi provides an alternative to traditional financial systems, offering open-source, programmable, and composable financial services. The main categories of DeFi include stablecoins, decentralized exchanges, credit services, derivatives, insurance, and asset management tools.

Key Takeaways:

- DeFi is characterized by trust-minimized operations, non-custodial design, and programmable, open, and composable architecture.
- DeFi offers benefits such as user control, transparency, global access, minimized insolvency risks, and innovation potential.
- DeFi risks include financial instability, technical issues, and protocol failures.
- Regulators are concerned about DeFi's peer-to-peer nature and the provision of non-compliant financial services.
- DeFi's characteristics may be incompatible with existing regulatory frameworks designed for intermediary-based systems.
- Regulators may attempt to recentralize DeFi to establish regulatory access points.
- Some DeFi protocols may reduce the need for investor protections by replacing third-party risk with predictable code.
- Proven, secure DeFi protocols do not require the same level of investor protection as traditional financial services. Investors do not need to be protected from themselves.
- DeFi is here to stay and requires financial liberty, not regulation.

XI

Decentralized Organizations

> *"Persons also are divided by the law into either natural persons, or artificial. Natural persons are such as the God of nature formed us: artificial are such as created and devised by human laws for the purpose of society and government; which are called corporations or bodies politic."*
>
> ~William Blackstone

Few things inspire the crypto community more than the possibility of organizing themselves in novel ways. The association of individuals in common enterprises is nothing new. The Romans already had partnerships such as the societas peculium and societas publicanorum that enabled parties to pool capital and share in an enterprise's profits and losses.[716] Modern corporations are the product of centuries of development. By the late Middle Ages, jurists viewed the corporation as having several distinct traits. Most essentially, it had a legal personality separate from that of its members.[717] The first large-scale, long-lasting joint-stock business corporations were the English East India Company, established in 1600, and the Dutch East India Company (VOC), established in 1602.[718] Eventually, the legal concept of limited liability emerged in the nineteenth century which gradually converged into a single, universal model of the limited liability legal entities of the twentieth century.[719] And now, in the twenty-first century, a new type of organization has emerged: the decentralized one. But before exploring this exciting development, a core principle must be explained: legal personality.

716 Fleckner, Andreas, "*Corporate Law Lessons from Ancient Rome,*" (Harvard Law School Forum on Corporate Governance, June 19, 2011), accessed on May 18, 2023, https://corpgov.law.harvard.edu/2011/06/19/corporate-law-lessons-from-ancient-rome/

717 Harris, Ron, "*A new understanding of the history of limited liability: an invitation for theoretical reframing,*" (Cambridge University Press, Journal of Institutional Economics, 2020, 16, 643-663), page 645.

718 Ibid., page 645.

719 Ibid., page 644.

So far as legal theory is concerned, Salmond explained, "a person is any being whom the law regards as capable of rights or duties."[720] A person, then, may be defined, for the purposes of the law, as any being to whom the law attributes a capability of interest and therefore of rights, of act, and therefore of duties.[721] Persons as so defined are of two kinds, distinguishable as natural and legal. A natural person is a being to whom the law attributes personality in accordance with reality and truth. Legal persons are beings, real or imaginary, to whom the law attributes personality by way of fiction when there is none in fact. Natural persons are persons in fact as well as in law; legal persons are persons in law but not in fact.[722] The reason why a corporation can operate independently of its owners is because it is a separate person in the eyes of the law and, as such, is capable of having rights and duties.

Technological developments push the frontiers of human cooperation. The explosion of cryptocurrency projects has brought with it an overabundance of governance experiments. By combining smart contracts into voting systems, crypto enthusiasts have set up a large variety of new—and not-so-new—business arrangements. The shift to algorithmic governance marks a natural progression in human cooperation. While previously, entities were incorporated with stately documentation garnished with fancy corporate seals, it is logical to have the future of international and online organizations written in smart contracts and code.

But what is the legality of such fully online organizations? To understand this, this chapter first examines the foundation and requirements of modern corporations. Next, it looks at the decentralized autonomous organization, how it works, and the problems it has relating to existing legal frameworks.

§ 11.1. The Corporation

This author already contemplated the incorporation of business entities directly on the blockchain back in 2014. By 2017, various projects raised money through ICOs to make the idea of a decentralized corporation a reality.[723] Unfortunately, the idea

720 Salmond (1913), § 108. The Nature of Personality, page 272.

721 Ibid., § 108. The Nature of Personality, page 273.

722 Ibid., § 108. The Nature of Personality, page 273.

723 Author: various projects raised money to set-up online legal innovations. One example I followed was https://aragon.org/. They raised 25 million USD in 24 hours with the claim they would be creating the "new Delaware." This was the third most successful crowdfunding project ever at that time. For years, they produced nothing but loose bits of code. The legal concerns presented here were never even addressed. Eventually, they did produce useful open source code that makes it easy to create and use a Decentralized Autonomous Organization.

went nowhere, because the law imposes requirements on corporations that are incompatible with a fully online, let alone decentralized, existence. To understand what a decentralized corporation can be, we must first ask a vital question: what is a corporation?

According to French sociologist of organizations Marie-Laure Djelic, a 'corporation' features several unique characteristics. First, it is the creation of a fictional legal person, separate from its owners, that potentially exists in perpetuity. A corporation has the right to own property, hire people, take on loans, and enter into contracts. It can sue and be sued. Another key aspect of the corporation is that it limits the liability of the owners. It is thus a great way for investors to invest capital without risking bankruptcy and without the need to be part of day-to-day management. This division of roles and responsibilities is another major characteristic of corporations.[724]

The Legal Framework of the Corporation

The corporation, as we know it today, originated in nineteenth-century England. Robert Lowe, a Liberal MP, spoke at the House of Commons in favor of limited liability. His words reveal the classical liberal mindset—common in the crypto space—of claiming the right to do business without unnecessary restrictions. To this day, it is easy to register a limited liability company (LLC) in the UK. He stated,

"My object at present is not to urge the adoption of limited liability. I am arguing in favour of human liberty – that people may be permitted to deal how and with whom they choose without the officious interference of the state... in my judgment, the principle we should adopt is this – not to throw the slightest obstacle in the way of limited companies being formed – because the effect of that would be to arrest ninety-nine good schemes in order that the bad hundredth might be prevented."[725]

This concept of limited liability was cemented in the landmark case Salomon v A Salomon & Co Ltd [1897]. This case involved Mr. Salomon, who had transferred his business of boot making, initially run as a sole proprietorship, to a company (Salomon Ltd.). But during unforeseen economic challenges, the business faltered. The liquidator, on behalf of unsecured creditors, alleged that the company was a sham. He claimed it was essentially an agent of Salomon, and therefore, with Salomon being the principal, he was personally liable for its debt. The case

724 Djelic, Marie-Laure, *"When Limited Liability was (Still) an Issue: Mobilization and Politics of Signification in 19th-Century England,"* (Sage Journals, Vol 34, Issue 5-6, 2013), page 613: (House of Commons, 1856, pp. 130–1).

725 LAW OF PARTNERSHIP AND JOINT- STOCK COMPANIES. HC Deb 01 February, 1856, vol 140, c131, House of Commons of the United Kingdom.

eventually came before the House of Lords, who argued that "once the company is legally incorporated it must be treated like any other independent person with its rights and liabilities appropriate to itself," because a body corporate made "capable" by statute is "at law a different person altogether from the subscribers to the memorandum."[726]

One idea prevalent in the crypto community, championed by Buterin, is that a corporation is nothing but a set of contracts.[727] The logical conclusion is that a set of contracts is all that is needed to establish a corporation. The reality is, however, that a corporation is a legal person recognized by law, capable of rights and duties. To understand the legality of crypto organizations, we have to look, again, at the legal framework.

The English (UK) companies law provides an idea of what requirements are needed in a legal framework. They include the registration in the register of companies, a signed memorandum [articles of association or bylaws], a certificate of incorporation, a registered office, and the names of proposed officers.[728] We can conclude that an organization wanting to operate as a person under the law has to have a unique identifiable name, a registration number, and a way to identify the people responsible for the entity, usually the directors. A physical registered office is needed, as well as registration with a company registrar, which is a centralized official institution. Although laws vary, the requirement of registration at a physical location appears to be universal around the world.[729] The reasons for this requirement are, firstly, to allow stakeholders and authorities to serve legal notices and, secondly, to determine which national law (lex societatis) governs the entity.[730] In addition, using the UK as an example again, for a court to recognize a foreign legal entity, registration in a recognized state is generally required.[731]

726 Salomon v A Salomon & Co Ltd, AC 22, (1897), House of Lords of the United Kingdom, https://www.trans-lex.org/310810/_/salomon-v-salomon-co-ltd-%5b1897%5d-ac-22/

727 Buterin, Vitalik, "Bootstrapping A Decentralized Autonomous Corporation: Part I," (Bitcoin Magazine, 2013,) accessed April 11, 2018, https://bitcoinmagazine.com/articles/bootstrapping-a-decentralized-autonomous-corporation-part-i-1379644274/ "When a corporation has limited liability, it means that specific people have been granted extra privileges to act with reduced fear of legal prosecution by the government – a group of people with more rights than ordinary people acting alone, but ultimately people nonetheless. In any case, it's nothing more than people and contracts all the way down."

728 "*UK Companies Act 2006, Chapter 46,*" (Legislation.gov.uk),accessed on March 17, 2024, http://www.legislation.gov.uk/ukpga/2006/46/pdfs/ukpga_20060046_en.pdf.

729 *"All company registers,"* (OpenCorporate, The Open Database Of The Corporate World), accessed March 17, 2024, https://opencorporates.com/registers?all_registers=true

730 COALA, "*Model Law for Decentralized Autonomous Organizations (DAOs),*" (Coalition of Automated Legal Applications, 2021), page 21.

731 "*UK Foreign Corporations Act, 1991,*" (Legislation.gov.uk), accessed on March 17, 2024, http://www.legislation.gov.uk/ukpga/1991/44/section/1

Under current law, corporations and other legal entities are tied to physical locations. The odds of getting a set of contracts without a place of registration or any of the other requirements to be recognized as a legal person are small. Hence, decentralized organizations cannot own (non-blockchain) property, engage in contracts, sue or be sued, open accounts at banks or exchanges, or shield investors from liability—at least for the time being.[732] Moreover, under modern tax transparency and substance regulations, banks and exchanges are not allowed to service persons without an established place of business.[733]

§ 11.2. Decentralized Autonomous Organizations

Contrasting the only hypothetical decentralized corporations are the now widely used decentralized autonomous organizations (DAOs). DAOs are organizational structures that use blockchains, digital assets, and related technologies to allocate resources, coordinate activities, and make decisions.[734] DAOs have organizational setups based on rules and policies that are encoded as computer code. These rules are transparent and controlled by participants through, usually, a public blockchain. There is no central authority. Rules and policies are executed by a set of smart contracts independent of human involvement. Decisions are made through proposals that are voted on by token holders. DAOs can even have a treasury that spends its funds based on community vote.[735]

DAOs are trying to solve several challenges seen in conventional centralized organizations. Traditional organizations lack transparency in decision-making. Their governance systems incentivize authoritarian leadership, fail to tap into the wisdom of the crowd, and often fail to utilize the knowledge and ideals existing

732 Author: to bridge the need for physical registration with blockchain based entities, in my earlier white paper I proposed two types of "Nexus" registration. The first, by specific free zones to open up registration for such a type of company. The second could be a de-facto registration based on the permanent establishment of the company, a concept coming from tax law—the logic being that the existence of (tax) duties should correspond with the existence of rights. While I think that in theory these ideas are interesting, I realistically do not see any practical application for now. The problems arising from the wide variety of existing corporate law frameworks would be uncountable, and in practice only few States might recognize, let alone facilitate such experimentation.

733 Author: based on the KYC laws previously mentioned.

734 WEF, "*Decentralized Autonomous Organization Toolkit – Insight Report*" (World Economic Forum, Geneva, Switzerland, January 2023), page 4.

735 Vadagnanadam, Advitya, "*Decentralized Autonomous Organizations (DAOs): Org-as-Code,*" (DevOps.com, July 9, 2021), accessed on March 17, 2024, https://devops.com/decentralized-autonomous-organizations-daos-org-as-code/, [Author: note the most authoritative source, but it provides a good overview. Edited for readability].

within the organization because these struggle to reach the top.[736] DAOs have gone beyond theory. Large international networks are now operational where users are self-regulating, managing large DeFi platforms, investment funds, online virtual worlds, and charities.[737]

DAO Basics

DAOs are smart contracts running on blockchain technology with no real legal framework. Once they exist on the blockchain, participants can freely interact with them using their open-source wallet. Every interaction must be signed as a transaction and incurs a transaction fee. Given that the open-source code offers tremendous freedom in how smart contracts can be coded, there are almost endless variations in how people can organize their DAO.

In general, the founder sets generic goals and policies and the rules for voting to govern the DAO over time. A smart contract issues the governance tokens and distributes them to participants. From then on, the owners of the tokens collectively decide on what proposals get approved by reaching consensus—for example, by a 51 percent majority vote. More drastic amendments, such as changes to the protocol itself, might require a 70 percent vote. DAO participants use social media such as Telegram and Discord to discuss ideas and goals. Based on these discussions, participants draft proposals for voting. Proposals can cover a wide variety of topics, from adjusting the code to hiring a marketing expert, giving grants to a good cause, or the development of the wider ecosystem. The proposals are then voted on and accepted when they reach the necessary threshold. The result can be that an amount in tokens is paid out from the treasury or a software update to the protocol is executed. Votes and transactions are stored on the immutable blockchain and, as such, keep a perfect record of both decisions made and the financial position.[738]

Despite the technological focus, DAOs are a tool to support human interaction. As such, there are often various identifiable roles within the system. First, there are the founders and early adopters who develop a unifying mission for a project and begin building. Next, there are those overseeing the keys that secure treasuries and smart contracts. There might be core contributors who build and maintain the codes and delegates who formally represent the DAO in the real world. Then there

736 Ibid.

737 Marr, Bernard,"*The Best Examples Of DAOs Everyone Should Know About,*" (Forbes, May 25, 2022), accessed on March 17, 2024, https://www.forbes.com/sites/bernardmarr/2022/05/25/the-best-examples-of-daos-everyone-should-know-about/

738 Author: I wrote this section on how DAOs work based on my own experience of creating a number of DAOs on testnets, and being a follower and participant in various real world DAOs.

is a wide variety of token holders and stakeholders who benefit from and engage with the DAO.[739]

DAO Governance

Every DAO needs to consider two things: operations and governance. Operations are the rules and processes for the day-to-day management of the platform. Governance is the process by which the community makes decisions not covered by operational rules.[740] In an ideal world, we create perfect smart contracts that never require changes. Unfortunately, it is impossible to dream up everything that could happen (and go wrong) beforehand. It is guaranteed that over time, adaptation will be needed, perhaps when a system fails or when it needs to be upgraded.[741] Consequently, the contract incompleteness problem applies to DAOs as well.

As mentioned, governance in DAOs is achieved in a less hierarchical manner and in a way that is generally reliant on group consensus. Still, a first distinction can be made between DAOs focusing on consensus—using smart contracts to aggregate the votes or preferences of members—and those aiming to be algorithmic in nature, with the underlying smart contracts dictating the functionality of the DAO.[742] A not-so-obvious example of the second category is Bitcoin itself; it is a consensus-based system, with core principles fixed in code that is impossible to change—often to the frustration of those who wish to align Bitcoin with their personal beliefs.

Every DAO project must determine the level of centralization it wishes to maintain. There is always a tension between the efficiency of centralization and the ideological or censorship-resistant allure of decentralization. Each community must balance the desire to benefit from the speed, cost, and operational efficiency of centralization against the benefits of decentralization—consensus-building, censorship resistance, transparency, and independence.[743] DAOs that are highly centralized can quickly adapt to changing circumstances, but they risk running into regulatory issues. DAOs that are highly decentralized are slow to adapt but can become impossible to regulate. Fully decentralized, algorithmic DAOs are almost as unstoppable as Lessig predicted.

739 WEF, *"DAO Toolkit,"* (2023), introduction

740 Cathy Barrera, "*Blockchain Governance 101,"* (The Open Application Network), accessed on March 17, 2024, https://www.youtube.com/watch?v=LNTsQsm6B44

741 Ibid.

742 Wright, Aaron, "*The Rise of Decentralized Autonomous Organizations: Opportunities and Challenges,"* (Stanford Journal of Blockchain Law & Policy, Vol. 4.2., 2021), Figure 1: A Taxonomy of DAOs

743 Boiron, Marc, "*Sufficient Decentralization: A Playbook for web3 Builders and Lawyers,"* (dYdX Trading, Aug 2, 2022), accessed on March 17, 2024, https://variant.fund/articles/sufficient-decentralization/: Centralization vs decentralization.

The central question of DAO governance is who gets to make the decisions. In practice, this hinges on the question of who gets to submit proposals and who votes. The general idea behind a DAO is that all participants can propose their projects and suggestions to the DAO. However, this can result in too many people having to engage with frivolous proposals. DAOs have introduced committees or delegates that filter or decide on proposals and leave only the most relevant up for vote. Another danger for DAO governing systems run by vote is that a single party obtains a large number of voting tokens, perhaps even large enough to attack the system itself. To prevent this, some DAOs have moved toward a one-person, one-vote model, enforced by identity or NFT-based voting. Quadratic voting is another solution; in this system, votes are counted according to their square root, so one hundred different token holders voting with one token for a proposal will have greater weight than one large holder casting two hundred tokens.[744]

DAO Legality

So far, we have discussed the technological and organizational aspects of the DAO. What about its legality? To recap, in essence, a corporation is a legal person recognized by law as being capable of having rights and duties.

When comparing the ways DAOs are set up with the basic requirements for corporations, it is clear that a DAO is not a corporation. It does not have a registered office and has no physical place of business or registration. There are no shareholders or directors. Since it is not a person, it cannot perform many of the tasks commonly attributed to it, such as owning property outside of the blockchain or engaging in legally enforceable contracts. Without the veil of corporate protection, participants in a DAO cannot be shielded from (unlimited) liability or taxes. Most DAOs fail to comply with existing corporate law and cannot enjoy regulatory clarity and legal protection. Available laws and corporate structures are designed for centralized operations, which are inherently incompatible with a decentralized structure.

DAO Regulatory Challenges

The unclear legality of DAOs has not diminished their popularity. DAO use has exploded. In certain cases, DAOs even offer investments in activities that have been previously reserved for licensed institutions. For regulators, multiple issues surround DAOs.

The first one is that of investment protection. Individuals need to know, first and foremost, what they are buying and, secondly, that their investments are safe.

744 WEF, *"DAO Toolkit,"* (2023), Governance, [Author: made summary and added explanations].

In many crypto projects, the founders themselves do not even know what they are selling, let alone that the investors understand what they are buying. Existing regulations mandate accounting standards, restrictions of sales on sophisticated products to accredited investors, observance of corporate formalities, restrictions in investment size, capital requirements, and risk and compliance management. It is exactly this line of reasoning that led to the EU passing MiCA regulation, which applies these kinds of requirements to crypto.[745]

Throughout its life cycle, a DAO could engage in several key activities that implicate tax issues. These could include initial sales of coins; income-generating treasury activities; business activities, such as selling software or NFTs; and grant programs and software development activities. There is currently no internationally agreed-upon position on how to treat DAOs for tax purposes, nor is there clarity domestically in most jurisdictions. The lack of an international tax framework for DAOs leaves room for the implementation of different DAO legislation by countries. This may result in mismatches and potential double taxation or no taxation, implying uncertainty for both the taxpayer and the tax authorities.[746]

The decentralized nature of DAOs presents other practical regulatory challenges. Without a central point of contact, it might be hard to find a person authorized to represent or defend the DAO in legal matters. If a ruling were to be passed on the DAO, it would require a vote of the widely dispersed and pseudonymous members, who might be unwilling to utilize treasury assets to satisfy a judgment. This increases the risk that such liability falls on (certain) individual DAO members.[747] This problem could also work the other way around: off-chain operations create obstacles for the DAO to accomplish its objectives. This could happen when natural persons with legal standing operate differently from the DAO's wishes; in such cases, decentralized governance is co-opted by a centralized mechanism.[748]

One thing rarely discussed by those regulating crypto is the inability to remove decentralized open-source code. There are indeed existing projects operating with identifiable parties performing regulated activities without a license—a target for regulators. But what if, to shut down these projects, all leading participants are arrested and imprisoned for life? Anyone with a smartphone and an Internet

745 EU, Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (OJ L 150, 9.6.2023, pp. 40–205), page 5, (18). [Author: summary is based on my overview of the various clauses of this bill].

746 WEF, *"DAO Toolkit,"* (2023), legal, page 21.

747 David Kerr, Miles Jennings, "*A Legal Framework for Decentralized Autonomous Organizations,*" (Andreessen Horowitz, June, 2022), page 13.

748 Ibid., page 12.

connection can keep using the protocols or 'fork' them and start over. The only way to stop this technology now is by stopping all digital technology. Financial regulators need to come to terms with this: Bitcoin will not be the only financial service beyond the control of regulators.

Applicable laws

The absence of a clear legal framework also means the absence of protection by the law. As it stands, one single DAO can be recognized as dozens of different things in multiple jurisdictions it operates in. In the absence of proper structuring, the way a DAO operates can give rise to all sorts of legal assumptions, often detrimental to the DAO and its participants. For example, in the U.S., there has been significant legal precedent in utilizing a functional approach to determining whether a partnership was formed—irrespective of disclaimers and specific intent to not form a partnership.[749] Under such an assumption, individual participants become liable for the DAO's actions (and, in certain jurisdictions, possibly for each other's actions).

Even worse, regulators may act where a DAO appears to have been established as a means of evading legal oversight. In an enforcement action, the U.S. Commodity Futures Trading Commission (CFTC) sanctioned bZeroX and its two founders for improperly offering unregistered margin trading in digital asset commodities. More controversially, the CFTC sanctioned Ooki DAO, which it concluded was an unincorporated association operating as a successor to bZeroX, engaging in identical activities with active participation from the same founders. The order suggested that any participant in Ooki DAO governance could be held responsible [for the actions of the DAO], raising questions about the scope of contributor liability.[750]

To bring structure to how DAOs are treated, the Coalition of Automated Legal Applications (COALA) launched model laws that aim to adopt a uniform set of rules applicable across multiple jurisdictions. It provides a minimum level of rights, duties, and protections that are widely recognized in legislation regarding analogous corporate entities in major jurisdictions.[751] The goal is to assist governments in

749 Ibid., page 17, [Author: they focus on the U.S. as an example, but the situation is similar in many places in the world].

750 "*Release Number 8590-22, CFTC Imposes $250,000 Penalty Against bZeroX, LLC and Its Founders and Charges Successor Ooki DAO for Offering Illegal, Off-Exchange Digital-Asset Trading, Registration Violations, and Failing to Comply with Bank Secrecy Act,*" (CFTC, September 22, 2022), accessed on March 17, 2024, https://www.cftc.gov/PressRoom/PressReleases/8590-22

751 COALA, (2021), Executive Summary, page 2.

crafting their own DAO laws and recognizing the full or partial legal personality of DAOs. It argues for functional equivalence of DAOs with existing legislation, such as how the registration of a DAO on a blockchain could be considered equivalent to the publicity and reliability of a corporate registry.[752] It goes on to list the requirements DAOs should meet to obtain legal personality, such as being published on a public blockchain, maintaining a set of bylaws, disclosing investor information, and being subjected to a dispute resolution mechanism.[753] While this is a great initiative, so far it misses the bigger picture. It fails to address which legal framework is supposed to apply to the DAO—and, more importantly, its activities. It asks for DAOs to be recognized as persons without making a clear connection to the real world or an existing governing law that assigns rights and duties. It is hard to imagine states lining up to facilitate this.

Wrapped DAOs

Founders of DAOs face significant regulatory uncertainty. For this reason, many DAOs opt for an existing business structure, commonly known as a 'legal wrapper.' The primary reason to establish a legal wrapper is to provide a set of useful, or even necessary, legal rights. The most useful is limited liability, ensuring participants are responsible at most for their investment. A legal entity can further enter into contracts, own property, have employees, pay taxes, and sue in its name. If a DAO lacks a legal wrapper, these functions must either be done by individual participants or by an associated legal entity, such as a corporation that performs the initial development work.[754]

Choosing a wrapper allows the selection of a legal structure that benefits the DAO. There are existing corporate structures that are flexible enough to be used by a DAO. Furthermore, various jurisdictions have enacted bespoke legal frameworks to attract crypto projects. The first nation to formally recognize the distinct legal personhood of DAOs was Malta, through legislation introduced in 2018. However, the formation of DAOs under Maltese law has been limited due to concerns about excessive complexity and centralized requirements.[755] Wyoming is an example of an American state that passed specific legislation to attract DAOs. However, it has certain quirks that might be problematic, such as not allowing 'foreign' DAOs and requirements that smart contracts should have the ability to be updated, modified, or otherwise upgraded.[756] It must be noted that this type of LLC is a partnership

752 Ibid., Executive Summary, pages 2-3.
753 Ibid., (2021), Article 4. Formation Requirements, page 18-19.
754 WEF, *"DAO Toolkit,"* (2023), Legal Structures, page 17.
755 Ibid., 4.3 Bespoke legislative frameworks, page 19.
756 *"ENROLLED ACT NO. 73, SENATE, SIXTY-SIXTH LEGISLATURE OF THE STATE OF WYOMING, 2021 GENERAL SESSION,"* Wyonming, United States, accessed on March 18, 2025, https://

under the laws of Wyoming, which might offer no federal recognition and no legal clarity for many DAOs.[757] To enhance its attractiveness, Wyoming passed additional, more favorable regulations for non-profit DAOs in early 2024.[758]

The Marshall Islands provides another excellent example. It established a specific DAO LLC that token-holding members control—smart contracts and member votes manage this LLC. It provides low taxation for for-profit DAOs and no taxation for charitable ones. The DAO can buy and sell property and delegate individuals for specific tasks in the legal sphere, such as signing contracts. The articles of the company can be drafted to make smart contracts and online voting binding for the DAO. Additionally, meeting regulatory requirements is relatively straightforward.[759]

Wrapping a DAO comes with consequences for the token holders. Depending on the structure, it could designate them as voters with a charitable foundation for the issuing of grants, shareholders of a foreign company, or beneficiaries of an income stream. All these roles result in different rights and duties and, more specifically, tax obligations. Setting up an innovative structure in an exotic jurisdiction itself invites new legal issues, as modern financial systems and governments scrutinize such offshore setups. Furthermore, despite the enthusiasm of those promoting these entities, not all jurisdictions have the sophisticated legal systems needed to handle the technical nature of blockchain disputes. All this potentially exposes even the participants of wrapped DAOs to legal uncertainty, compliance issues, and unfavorable tax rules.

Furthermore, once a DAO is 'wrapped' by a legal entity, it is no longer decentralized. It becomes a single person before the law, subject to the laws of a particular jurisdiction, often even represented by a single director. As such, it is not much different from an

wyoleg.gov/2021/Enroll/SF0038.pdf: (d) An algorithmically managed decentralized autonomous organization may only form under this chapter if the underlying smart contracts are able to be updated, modified or otherwise upgraded. 17-31-116. Foreign decentralized autonomous organization. The secretary of state shall not issue a certificate of authority for a foreign decentralized autonomous organization.

757 Kerr & Jennings, (2022), page 12.

758 "*SENATE FILE NO. SF0050, 24LSO-0104, 2024, Unincorporated nonprofit DAO's. Sponsored by: Select Committee on Blockchain, Financial Technology and Digital Innovation Technology,*" (State of Wyoming Senate, No date), https://www.wyoleg.gov/2024/Introduced/SF0050.pdf, [Author: this legislation offers more flexibility in how a DAOs arrange their affairs onchain. It contains interesting clauses on the rights and duties of members (the ability to expel one of the members), which are not necessarily part of standard DAOs. This seems to me as a fine example of how law becomes adjusted to blockchain tech, while at the same time demanding tech adapts to law as well—a meeting in the middle].

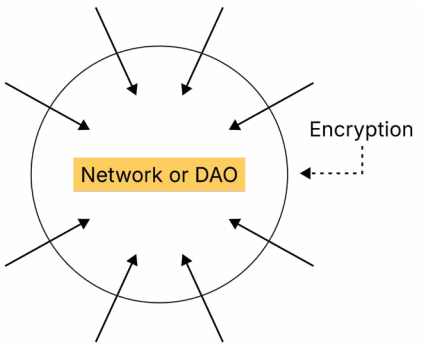
759 DECENTRALIZED AUTONOMOUS ORGANIZATION ACT 2022, NITIJELA OF THE REPUBLIC OF THE MARSHALL ISLANDS, 43RD CONSTITUTIONAL REGULAR SESSION, 2022, Marshall Islands.

existing corporation. Legally, these entities are not autonomous, as corporate laws governing these wrappers usually specify conditions for termination.[760] Wrapping a DAO thus removes the 'D,' and partly the 'A,' from the equation, leaving only the 'O' of organization—resulting only in having an organization with an innovative voting, member, or beneficiary structure.

As with smart contracts, DAOs should be viewed primarily as technical tools. By focusing on creating organizations, engaging in risk-bearing activities, and performing regulated (financial) activities, this industry is missing out on many possible use cases for this technology. The real innovation might come from removing the 'O' from the equation. Section III introduces the decentralized autonomous association (DAA), a simple solution that revitalizes DAO technology and makes it available to all organizations in the world.

DAO Liability

This type of collaboration raises other regulatory considerations. Some DAOs have grown too large and decentralized to wrap. How, then, can someone ensure limited liability when participating in such a DAO? One simple solution has remained overlooked.



Cryptography has created an impenetrable layer 'around' crypto networks and open-source software projects. What happens within these networks is protected from outside influences by a 'cryptographic protection circle.' This is demonstrated by the figure on the right. The use of such networks, including DAOs, cannot be restricted by centralized authorities. Regulation can therefore only focus on the participants (black arrows) of the network. For example, users can be held liable for whatever happens within a DAO or fully taxable at personal tax rates on its proceeds.

In cases where limited liability or taxation are concerns, users could consider using a private layer of protection when accessing a DAO network—wrapping themselves instead of the DAO. This could be achieved with a simple corporation or any other currently existing legal structure. In such a setup, the DAO itself offers an unclear legal structure, but at least the individual participant can limit or structure liabilities and

760 Ibid., § 113. Withdrawal of Members, § 114. Dissolution: *"(1) A decentralized autonomous organization organized under this Chapter shall be dissolved; it shall be dissolved upon the occurrence of any of the following events: (d) By order of the Registrar of Corporations if the decentralized autonomous organization is deemed to no longer perform a lawful purpose or is no longer under the control of at least one (1) natural person;"*

obligations in a more controlled fashion. If we combine this with an international law innovation called Freedom of the Nodes, decentralized networks could remain outside any one jurisdiction and free to use for all. This is explained in Section III of this book.

§ 11.3. Summary and Interpretation

Key Takeaways:

- Corporations are legal persons recognized by law as capable of having rights and duties.
- Under current law, corporations and other legal entities are tied to physical locations.
- Decentralized autonomous organizations (DAOs) are organizational structures using blockchain technology to allocate resources, coordinate activities, and make decisions.
- DAOs operate based on rules encoded as smart contracts, with decisions made through token-based voting systems.
- DAOs (generally) lack the requirements to be considered legal persons capable of rights and duties.
- DAOs cannot own (non-blockchain) property, engage in contracts, sue or be sued, open accounts at banks or exchanges, or shield investors from liability.
- DAOs face regulatory challenges in terms of investor protection, the unlicensed provision of financial services, tax liabilities, and enforcement difficulties.
- Innovative legal frameworks to accommodate DAOs have been developed in several jurisdictions, such as in Malta, Wyoming, and the Marshall Islands.
- A legal wrapper offers DAOs legal personality but compromises their decentralized nature.
- Certain DAOs are so large and decentralized that they are beyond wrapping.
- Wrapping individual participants in legal entities, rather than the DAO itself, could provide limited liability in DAOs
- When DAOs stop pretending to be corporations, the technology can start being used far more widely than it currently is. More on this in Section III.

XII

Decentralized Jurisdictions

> *"The sovereignty united to the domain establishes the jurisdiction of the nation in her territories, or the country that belongs to her. It is her province, or that of her sovereign, to exercise justice in all the places under her jurisdiction, to take cognizance of the crimes committed, and the differences that arise in the country."*
>
> ~Emmerich de Vattel

In late 2022, the U.S. Securities and Exchange Commission (SEC) filed a lawsuit against Ian Balina concerning an ICO that took place in 2018. It alleged that he promoted unregistered securities in connection with Sparkster tokens and failed to disclose the compensation he received for doing so. At first glance, this lawsuit may not seem remarkable, as the SEC has filed similar suits in the past. However, the SEC's claim in this case was both interesting and concerning. They argued that because the majority of the Ethereum network's validating nodes are located in the U.S., the entire network falls under U.S. securities laws.[761]

If such claims were ever confirmed by a judge, it would have significant implications across the digital asset space, the metaverse, and beyond. Such a precedent could present significant challenges for other applications, services, and projects, including NFTs. Moreover, the SEC may seek to use similar arguments to assert jurisdiction over transactions on other blockchain networks.[762] This case serves as

761 U.S. SECURITIES AND EXCHANGE COMMISSION against IAN BALINA, UNITED STATES DISTRICT COURT WESTERN DISTRICT OF TEXAS AUSTIN DIVISION, Civil Action No. 1:22-CV-950, accessed on May 25, 2023, https://www.sec.gov/litigation/complaints/2022/comp-pr2022-167.pdf: *"69. The U.S.-based investors in Balina's pool irrevocably committed to the transaction when, from within the United States, they sent their ETH contributions to Balina's pool. At that point, their ETH contributions were validated by a network of nodes on the Ethereum blockchain, which are clustered more densely in the United States than in any other country. As a result, those transactions took place in the United States."*

762 Martino, Ralph V. De , et al., *"All Your Ether (Are) Belong To US: SEC Claims Jurisdiction Over*

a reminder that the legal landscape surrounding cryptocurrencies is still evolving. It touches on one of the central issues of law: jurisdiction.

What is a jurisdiction? According to the Legal Information Institute, it consists of two elements:[763]

- Power of a court to adjudicate cases and issue orders.
- Territory within which a court or government agency may properly exercise its power.

'Jurisdiction' thus can have two meanings: the authority of a court to rule on a specific case and the territory to which this authority is limited.

§ 12.1. Jurisdiction's Origin

Lowe argued that jurisdictions almost certainly began as a personal, rather than a territorial, link. During the feudal period, individuals owed their allegiance to a king or other leader, and he in turn owed them the duty of protection.[764] Nowadays, it is nation-states that have the right to enforce their laws and punish non-compliance.[765] To better understand what a modern jurisdiction is, we must therefore understand what a state is. The 1933 Montevideo Convention provides a widely accepted definition. The convention offers the following definition:

> *"The state as a person of international law should possess the following qualifications:*
>
> *A) a permanent population;*
>
> *B) a defined territory;*
>
> *C) a government; and*
>
> *D) capacity to enter into relations with the other states."*[766]

Entire Ethereum (ETH) Network," (National Law Review, Volume XII, Number 286, October 13, 2022), accessed on May 25, 2023, https://www.natlawreview.com/article/all-your-ether-are-belong-to-us-sec-claims-jurisdiction-over-entire-ethereum-eth [Author: made some alterations for readability]

763 *"Jurisdiction,"* Legal Information Institute, Cornell Law School, accessed on March 20, 2018, https://www.law.cornell.edu/wex/jurisdiction

764 Lowe (2007): Chapter 5.4, Jurisdiction over Nationals

765 Ibid., Chapter 5.1, State Jurisdiction

766 "*Montevideo Convention on the Rights and Duties of States,*" (Montevideo, 26 December 1933), accessed on March 20, 2025, https://www.jus.uio.no/english/services/library/treaties/01/1-02/rights-duties-states.html: Article 1

When looking at items a) and b) on the list, it is clear that the jurisdiction of a state is limited to a defined territory in the real world with a permanent population. Consequently, technology projects solely existing in cyberspace cannot become states. There have been other forms of jurisdiction too. In the history of English common law, a jurisdiction could be held as a form of hereditary property called a franchise. Municipal corporations, religious houses, guilds, and early universities held various powers within them. However, even though such jurisdiction was enforced neither by a state nor government, they were always tied to a physical territory.[767]

§ 12.2. Physical and Cyber Jurisdictions

The tension between physical territory and cyberspace has existed since the Internet's inception. The current trend is that individual states claim jurisdiction based on the smallest of links, including servers' locations, the residence of a client, or the use of a domain name.[768] Bertrand de la Chapelle and Paul Fehlinger compared these 'hyper territorial' methods that national governments use to a legal arms race.[769] The SEC case discussed above is a fine example of such overreach.

The absence of uniform Internet jurisdiction regulations, despite widespread adoption since the 1990s, suggests that sensible rules for more complex decentralized financial systems may be far off. To fill this void, several early crypto projects focused on creating blockchain-based jurisdictions and even a new kind of state.[770] They did this by writing code and ignoring the law. The hierarchy of law framework accurately predicted the limited success of these projects. After all, these and all other crypto projects operate at the private law level while ignoring civil and international law. At the private level, one can, at best, create a legal application that establishes rights and duties for participants—but it has no force outside this limited group.

767 Szabo, Nick, "Jurisdiction as Property: Franchise Jurisdiction, from Henry III to James I," (The George Washington University of Law, April 21, 2006), page 4

768 Chapelle, Bertrand de la, Fehlinger, Paul, "Jurisdiction On The Internet: From Legal Arms Race To Transnational Cooperation," (Internet & Jurisdiction, April 2016), accessed on April 5, 2018, https://www.internetjurisdiction.net/uploads/pdfs/Papers/IJ-Paper-Jurisdiction-on-the-Internet-PDF.pdf, page 7.

769 Ibid.

770 Author: one example is a project called Bitnation Pangea. It aimed at providing everybody the tools to create their own nation on the blockchain. People got excited, funds were raised, many applied for citizenship and started "embassies" in their home country. The revolution was short lived: the last I saw they were selling real estate in the metaverse, and the domain has since been sold to a marketer and filled with click-bait articles and affiliate links.

Escaping civil law proved challenging in a world divided into states. In a final attempt to avoid jurisdictional issues and SEC shenanigans altogether, certain projects are exploring the possibility of storing data and blockchain nodes in space.[771] Although this concept is intriguing, it cannot fully circumvent physical jurisdiction; after all, we are all living on one planet. The focus of these projects is wrong. No real progress can be made if the goal is to replace liberty in law with naive fantasies of freedom in (cyber) space.

Fortunately, another form of jurisdiction exists that does not involve territory. We saw that organizations, such as the G20 and the WHO, regulate affairs of international concern. Legitimate governments have delegated this authority to these organizations. The jurisdiction of IOs is not limited to a specific physical territory. This jurisdiction is established by the consent of states. This hints at another source of jurisdiction: consent. Given that the public is the ultimate source of legitimacy of the state, the public can consent to other jurisdictions as well. Section III examines blockchain-based Consensus Jurisdictions that govern decentralized economies.

§ 12.3. Summary and Interpretation

Key Takeaways:

- Jurisdiction encompasses both the authority to rule on specific cases and the geographical limits within which this authority can be exercised.
- Jurisdiction began as a personal link in feudal times but evolved to be tied to states and defined territories.
- Jurisdiction nowadays is associated with the state.
- Modern states require a permanent population, defined territory, government, and capacity for international relations.
- There is tension between physical jurisdictions and cyberspace.
- The absence of uniform Internet jurisdiction regulations suggests that rules for decentralized financial systems may be far off.
- Early crypto projects attempted to create blockchain-based jurisdictions. They had limited success due to operating at the private law level, ignoring natural, civil, and international law.

771 "*Space Mission Design & Management,*" (Spacechain), accessed on March 18, 2024, https://www.spacechain.com/blockchain-space-mission-design-management/: "*SpaceChain aids the ecosystem to explore and build its own fintech payment infrastructure in space and expand the ecosystem's applications based on space nodes.*"

- Legal application at the private level only establishes rights and duties for participants.
- No progress can be made when focusing on freedom in cyberspace instead of liberty in law.
- A form of jurisdiction exists that does not involve territory: jurisdiction by consent.

XIII

Decentralized Dispute Resolution

> *"But as nature does not allow one to plunge into war on the slightest provocation, even when one is fully convinced of the justice of his cause, an attempt must first be made to settle the matter by gentler means, namely, by friendly discussion between the parties and an absolute (not conditional) mutual promise, or by appeal to the decision of arbitrators."*
>
> ~ Samuel Pufendorf

In the sixth century BC, the Achaemenid Empire was the scene of a trial. Sisamnes, a royal judge under the reign of the Persian 'King of Kings,' Cambyses II, had accepted a bribe from a party in a lawsuit. As a result, he rendered an unjust judgment. King Cambyses learned of the bribe and had Sisamnes arrested. However, this would be no ordinary punishment: Sisamnes was executed and all his skin flayed off. Next, strips of dried skin were strung over the chair on which Sisamnes used to sit to deliver his verdicts. From then onward, the human leather served as a reminder to all judges on the bench of the consequences of rendering unfair judgments.

Despite efforts to create fair and just laws, in practice, disputes arise the moment the ink has dried. Sisamnes's story serves as a reminder that the success of a legal system depends on fairly balancing interests and ensuring fair rulings in case of a dispute.

The American Bar Association explains that courts serve as a crucial aspect of the legal system. They interpret and apply the law when parties are in dispute. In that way, courts take law out of dry and dusty law books and make it part of the living fabric of our lives. They resolve disputes between people, companies, and units of government. Courts protect against abuses by all branches of government. They protect minorities of all types from the majority and protect the rights of people

who cannot protect themselves. They embody notions of equal treatment and fair play. The courts and the protections of the law are open to everybody.[772]

Court rulings guide the interpretation of law. As a result, branches of government and special interest groups alike take disputes to court in the hope of achieving rulings in their interest. However, besides litigation with a court, there are other forms of dispute resolution, such as negotiation, mediation, conciliation, and, of course, arbitration.

§ 13.1. Arbitration

What if a dispute arises over what happens on the blockchain? The questionable legality of smart contracts, the legal qualification of associated tokens, and the difficulty in establishing jurisdiction all make it challenging for a judge of a national court to assert jurisdiction and discern governing laws. In response to these challenges, participants active on a decentralized network might choose to have their interactions governed by arbitration—a private court system for resolving disputes.

According to professor of law Margaret J. Moses, parties who arbitrate have decided to resolve their disputes outside any particular national judicial system, ensuring the neutrality of the forum. In most instances, arbitration delivers a final and binding decision, producing an award that is enforceable in most national courts. The decision-makers, usually one or three arbitrators, are generally chosen by the parties. Moreover, the parties are free to choose the governing laws as well as the seat and rules of arbitration, the place of arbitration, and the language of arbitration. The power of the arbitrators to decide on a case depends on the explicit consent of the parties. This opens the door to the use of arbitrators with knowledge of the subject matter as compared to local judges. Procedurally, arbitration involves less discovery compared to full-scale litigation, and the possibility exists to keep proceedings and the resulting award confidential. There is a lack of opportunity for multiple appeals, meaning a result is achieved in a short period of time.[773]

To subject an engagement to binding arbitration, one simply must include an arbitration clause in an agreement. This arbitration agreement then forms a unique body of private law. By signing the agreement, the involved parties consent to be bound by this body of law. As a result, arbitration courts can rule on matters agreed

772 "*How Courts Work,*" (American Bar Association, September 09, 2019), accessed March 5, 2021, https://www.americanbar.org/groups/public_education/resources/law_related_education_network/how_courts_work/court_role/

773 Moses (2017), Combination of characteristics selected from Chapter 1

upon in the contract. It is recommended that arbitration agreements are written as broadly as possible. This way, they cover disputes arising not only from the contract's text but also those based on tortious acts or unfair business practices.[774]

As discussed earlier, the New York Convention makes arbitration awards enforceable in almost any country in the world. Within this framework of international arbitration, contracting parties are free to design their own private legal systems of law. A contract signed within the correct framework enjoys the protection of almost all legal systems of the world.

International Arbitration Framework

Let us examine the legal framework for international arbitration. It was Moses who described the 'inverted pyramid' mentioned earlier, which for international arbitration looks as follows:[775]

International arbitration provides contracting parties with the freedom to choose governing laws. As seen in the image, this is usually a national law. English law is often chosen as the governing law in international business. An obvious reason for this is that it is written in the main language of business and science. In addition, it has been used in international business for centuries. Moreover, it is transparent, predictable, and flexible, and it offers complete freedom of contract.[776] It can function as a choice of law in arbitration courts in international financial centers such as Singapore, Hong Kong, and Dubai. Settling disputes under a fair and well-established legal system is attractive to the international community. It prevents falling under lesser-known systems such as Sharia law and avoids proceedings in Arabic or Chinese.

774 Ibid., Chapter 2, B, 2, A

775 Ibid., Chapter 1.E, The Regulatory Framework

776 *"England and Wales: The jurisdiction of choice,"* (The Law Society of England and Wales), accessed April 10, 2018, http://www.eversheds-sutherland.com/documents/LawSocietyEnglandAndWalesJurisdictionOfChoice.pdf

Historically, plenty of examples exist of arbitration courts using 'bottom-up' laws that have been created by private parties, not by governments—one example being Lex Mercatoria, mentioned in the chapter on private law. Contracting parties remain free to arrange their engagements under conditions they see fit. However, for a system of governing laws to have force in the real world under agreements like the New York Convention, certain requirements must be met. A key requirement is the use of accepted arbitration laws.

International Contract and Arbitration Laws

Numerous empowering international law instruments exist to facilitate cross-border contract enforcement. These frameworks range from standards for formalizing contracts to complete sets of governing laws for arbitration. One example is the Principles on Choice of Law in International Commercial Contracts (HCCH Principles). This is a non-binding set of principles affirming that parties to a commercial contract have the autonomy to select, by agreement, the law governing their contracts. Another example is the United Nations Commission on International Trade Law (UNCITRAL) Electronic Communications Convention. It assures that communications exchanged electronically, including contracts, are as valid and enforceable as their paper-based equivalents.[777]

The chapter on international law distinguished between international laws governing state interactions and private international laws (PILs) addressing the cross-border activities of individuals. As a rule of thumb, parties are free to select the governing laws for their contract. PILs merely determine whether such a choice is valid and effective. When the parties have not chosen the law governing their contract or their choice is invalid or ineffective, PIL rules determine which law applies to the transaction.[778] Certain instruments, such as the aforementioned Electronic Communications Convention, only apply to the contract as a direct result of a choice.[779] The United Nations Convention on Contracts for the International Sale of Goods, on the other hand, is a hard-law instrument of a less voluntary nature. It applies to the international sale of goods and is binding for parties, judges, and arbitrators when the conditions set out in the instrument itself are met.[780]

777 UNCITRAL, "*UNCITRAL, HCCH and Unidroit – Legal Guide to Uniform Instruments in the Area of International Commercial Contracts, with a Focus on Sales,*" (United Nations Commission on International Trade Law, Vienna, Austria, February 2021), page 6.

778 Ibid., B. Application of PIL rules, page 11.

779 Ibid., (2021), III. Determination of the law applicable to international commercial contracts, page 11.

780 Ibid., (2021), IV. Substantive law of international sales, page 27.

In addition to the freedom to choose national governing laws, parties enjoy the freedom to choose *non-state* 'rules of law.' Such freedom was recognized as early as 1985 in the UNCITRAL Model Law on International Commercial Arbitration. Today, in accordance with most arbitration laws and rules, arbitrators must uphold the parties' choice concerning the rules of law governing their dispute.[781] The HCCH Principles specify that the notion of 'rules of law' includes rules that are "generally accepted as a neutral and balanced set of rules."[782] One cannot make up a set of governing laws and expect arbitrators or judges to uphold them. However, it also means that once a set of standards has become 'generally accepted,' it can serve as governing law for private contracts. This paves the way for the creation of guiding principles for blockchain technologies discussed in the next section of this book.

The welcome news is that vague concepts such as Lex Mercatoria have made way for specific legal frameworks that are widely recognized and ready to use. Examples of available frameworks for arbitration are UNCITRAL and the International Institute for the Unification of Private Law (UNIDROIT). The next section examines if these can be applied to blockchain technology.

UNCITRAL

UNCITRAL plays a key role in developing frameworks in pursuit of its mandate to further the progressive harmonization and modernization of the law of international trade. It does this by preparing and promoting the use and adoption of legislative and non-legislative instruments in key areas of commercial law.[783] It applies solely to the sale of goods.

UNCITRAL is named in the crypto community for the potential role it could play in outlining a regulatory framework.[784] However, it must first be noted that UNCITRAL is not a single uniform law but rather a patchwork of instruments dating back to 1980. We can think about the Model Law on Electronic Commerce, the Model Law on Electronic Signatures, the Convention on the Use of Electronic Communications in International Contracts, the Model Law on Electronic Transferable Records, and others.[785]

781 Ibid., (2021), Choice of State law or transnational (non-State) law, page 13.

782 Ibid., (2021), "Rules of law" and non-State law, page 13.

783 "*United Nations Commission On International Trade Law,*" (UN), accessed on May 23, 2023, https://uncitral.un.org/

784 UNOPS (2018), 5.9 Conclusion: A normative role for UN organizations in Blockchain Development, page 86.

785 Ibid., page 86.

Japanese professor of law Koji Takahashi, who analyzed these instruments closely, concluded that they do not readily suit decentralized technologies. First, the fact that functional equivalence is a principle underlying UNCITRAL does not mean that any technology can create a digital signature that satisfies the original paper-based requirements.[786] For example, a signature may be met by an electronic transferable record only if a reliable method is used to identify that person.[787] This could be problematic on a public blockchain with semi-anonymous users. Moreover, cryptocurrency might not fall under the category of money, potentially placing crypto transactions outside the scope of these instruments.[788]

Blockchain transactions will encounter numerous other hurdles with UNCITRAL. For example, even after decades of evolution in this space, it is not even certain whether transactions in digital information (software, computer programs, applications, music, e-books, etc.) are within its scope. The lack of uniformity in how digital products are treated across jurisdictions expresses itself in two issues. The first involves the definition of goods and the question of whether goods can be intangible. The second issue concerns the nature of the transaction, which could be a sale, a licensing agreement, or the granting of access to data not protected by property law.[789] Seeing how problematic the sale of a simple e-book is for this framework, one must be realistic about the chances of a blockchain-based peer-to-peer economy fitting into it. Moreover, UNCITRAL has established a limitation period for commencing legal proceedings under a contract. After this period has passed, a claim can no longer be recognized or enforced.[790] Any such time limitation is at odds with immutable and permanent smart contracts that remain active despite any statute of limitations.

The central premise of the UNCITRAL framework is the facilitation of the international sale of goods: the transfer of property for money. Within the current framework, cryptocurrencies are neither goods nor money, and whether an exchange of property rights even takes place is uncertain since crypto property rights are not universally recognized. The UNCITRAL framework cannot govern decentralized

786 Takahashi (2017) page 82.

787 Ibid., page 83.

788 Ibid., page 85, [Author: Bitcoin has since become legal tender in El Salvador].

789 UNCITRAL, (2021), D. Software, data and intellectual property issues, page 99: "*The issue involves both the definition of "goods" (e.g., the question of whether goods must be tangible) and the nature of the transaction (e.g., sale, licence of property or access to data not protected by a property regime)*"

790 Ibid., Limitation Convention, page 6: "*The Limitation Convention establishes uniform rules governing the period of time within which a party to a contract for the international sale of goods must commence legal proceedings to assert a claim arising from the contract.*"

technology without significant alterations. The UN itself agrees and calls for action to obtain such a normative role for itself.[791]

UNIDROIT

A second possible framework for arbitration exists in the UNIDROIT Principles of International Commercial Contracts (UPICC). The UPICC is a non-binding codification of contract law, rules, and principles designed for international trade on a global scale. Its objective is to make available a set of rules that is better suited to cross-border transactions than national contract laws. Three features of the UPICC serve this purpose. First, the UPICC provides a 'neutral' law for international transactions: a set of rules that is not the national contract law of either of the parties. It achieves this by setting forth rules that do not specifically resemble any particular national contract law and that reflect a compromise between the common law and the civil law traditions. Second, the UPICC stipulates rules that are better suited to the special requirements of international trade than national contract law regimes, which are primarily designed to deal with national transactions. Third, the UPICC is multilingual.[792] Furthermore, the UPICC, being a soft-law instrument, offers a greater range of possibilities to parties on how they would like it to be used, either during the performance of the contract or when a dispute arises.[793]

The UPICC differs from the UNCITRAL framework in that it is not a treaty and thus only applies by choice. Moreover, the UPICC spells out general rules for all types of contracts, including service contracts. They contain a vast array of rules pertaining to the general law of contract and obligations that help govern a contract.[794] The UPICC also allows for longer-term so-called 'relational contracts' as opposed to focusing on individual, one-off transactions.[795]

Nevertheless, the UPICC contains several clauses that limit its application to emerging technologies. For example, payments are defined as a transfer to any of the financial institutions in which the obligee has made it known that it has an account.[796] This does not apply to a financial system without intermediaries. Next, it adds that payments have to be made in the currency of the place for payment.[797]

791 UNOPS (2018), 5.9 Conclusion: A normative role for UN organizations in Blockchain Development, page 86.

792 UNCITRAL, (2021), C. Unidroit Principles of International Commercial Contracts, page 72.

793 Ibid., page 17.

794 Ibid., 5. What are the basic differences as compared to the CISG and what is their nature?, page 74.

795 Ibid., 12. How do the UPICC interact with other uniform law instruments?, page 87.

796 "*UNIDROIT PRINCIPLES OF INTERNATIONAL COMMERCIAL CONTRACTS*" (International Institute for the Unification of Private Law (UNIDROIT), Rome, 2016), Article 6.1.8

797 Ibid., ARTICLE 6.1.9

Moreover, contracts need to be in writing, and writing is defined as any mode of communication that preserves a record of the information contained therein and is capable of being reproduced in *tangible form*.[798] Add to that a right to terminate a contract,[799] which might not work for specific smart contracts. It further includes various conditions under which someone might gain or lose their rights—again, this cannot be coded into a smart contract beforehand.[800]

Still, when analyzing the UPICC, it is the superior instrument for governing blockchain, as compared to UNCITRAL. It offers more flexibility and applies to more use cases. It adds general governing principles to an engagement and thus is better suited to addressing incomplete contracts. However, certain amendments are needed for this to become a fully suitable governing law. Luckily, making amendments to a soft-law instrument maintained by a single international organization is easier than having to sign a treaty with multiple jurisdictions around the world. Given that the UPICC is generally accepted as a neutral and balanced set of rules and accepted by arbitrators, this seems the most likely candidate for a framework of decentralized governing law, as will be discussed in the next section. This will be no easy feat. It is hard enough to have standards in programming. It will be even harder to merge them with a framework that aligns with various legal systems.

Seat of Arbitration

We cannot conclude this discussion without a brief description of the arbitration court that is to rule on disputes. First, where should such a court be located? It turns out that it can be anywhere. The New York Convention requires contracting states to recognize and enforce arbitration awards made in other contracting states. Regardless of the technological tools used, for this to work, a 'seat of arbitration' is required in one of the participating states.

Luckily, a solution already exists: online arbitration. The Hong Kong International Arbitration Centre, for example, offers a fully online arbitration procedure.[801] As a result, Hong Kong could become the seat of arbitration for a dispute over a smart contract, governed by updated UNIDROIT principles. Such a ruling would be enforceable around the world due to the New York Convention. Arbitration courts worldwide could specialize and compete to govern specific blockchains and ecosystems. The next section of this book elaborates on the possibilities.

For comparison, large networks of cooperation already exist, albeit under the banner of a single entity. Take, for example, the freelance platform Upwork, which

798 Ibid., Article 1.11 (Definitions)
799 Ibid., Article 7.3.1, [Author: a Smart Contract Block could account for this].
800 Ibid., Article 10.8
801 Moses (2017): Chapter B3B, Online Arbitration

facilitates international contracting work. Users are subjected to Upwork's terms and conditions, but their mutual disputes are settled by arbitration.[802] Such an arbitration binds the parties not because of the authority of Upwork but because of the parties' consent to the arbitration agreement.[803]

§ 13.2. Blockchain Arbitration

Over the years, various projects in the crypto space have explored fully decentralized arbitration. A common feature of all these projects is the lack of reference to seats of arbitration or governing law. There are two recurring ideas on how decentralized rulings should be enforced: by reputation or by smart contract. We saw in the analysis of international law that a system based on reputation and consensus could work. But who says that pseudo-anonymous individuals online care as much about their reputation on a random decentralized network as a democratically elected president of a state? This is especially questionable when their life's savings are at stake.

Another recurring idea is the use of smart contracts funded by one or both parties that automatically award payments based on the outcome of the arbitration. However, if someone believes they do not owe payment, why would they fund a smart contract for arbitration when the best outcome is merely retaining what they already have? Without an enforcement mechanism, decentralized arbitration is a paper tiger. Without a legal framework, its awards cannot be enforced in the real world. Moreover, without a guiding set of principles or governing laws, the outcomes of these systems will be even more random and arbitrary than the patchwork of legal systems they intend to replace.

Having said that, innovative ideas are being proposed in the procedures, as well as the selection of arbitrators. Online (small) transactions or alternative forms of cooperation could benefit immensely from such a form of arbitration. Decentralized arbitration is likely to be cheaper and quicker than going through the traditional legal system or obtaining and enforcing an arbitration award. The next section of this book includes decentralized arbitration within the framework of the decentralized legal system.

802 "*Arbitration,*" (Upwork), accessed on March 19, 2024, https://support.upwork.com/hc/en-us/articles/14044146250259-Arbitration

803 "*User Agreement,*" (Upwork, Effective March 19th 2024), accessed on Dec 12, 2024, available on, https://www.upwork.com/legal#DISPUTESBETWEEN: *"For the avoidance of doubt, Claims covered by this Arbitration Provision include, but are not limited to, all claims, disputes or controversies arising out of or relating to this Agreement, the Terms of Service and the Upwork Payroll Agreement."*

§ 13.3. Summary and Interpretation

Key Takeaways:

- Courts play a crucial role in interpreting laws, resolving disputes, and protecting rights.
- Arbitration courts offer an alternative to national court systems for resolving disputes, especially in international contexts.
- Arbitration allows parties to choose governing laws, arbitrators, and procedural rules, offering more flexibility than traditional courts.
- Fully decentralized arbitration projects in the crypto space face challenges in enforcement and lack established legal frameworks.
- English law is often used to govern international commercial contracts.
- Parties can choose non-state 'rules of law' to govern their disputes in arbitration if they are generally accepted as neutral and balanced.
- UNCITRAL and UNIDROIT provide such accepted frameworks for international commercial contracts and arbitration.
- UNCITRAL instruments are not ready for governing blockchain technologies and need significant modifications.
- UNIDROIT principles offer more flexibility and broader applicability for governing blockchain technologies. However, work is needed to improve their usability.
- Online arbitration is emerging as a solution for resolving disputes in digital contexts, including those related to the blockchain.

XIV

Summary and Interpretation Section II, Decentralized Technologies and the Law

> *"Be you never so high, the law is above you."*
> ~Thomas Fuller

Bitcoin revolutionized the idea of money by enabling near-instant, low-cost global payments. Blockchain technology enables direct peer-to-peer transactions without intermediaries. Bitcoin is secured by open-source code, math, and unbreakable cryptography rather than complex regulations and oversight. Ethereum expanded on Bitcoin's concept by creating a distributed world computer capable of running smart contracts and decentralized applications. This development expanded the ways to transact in cryptocurrency even further.

Without private property, there can be no expression of free will in the public realm. Only property rights can be owned, and nothing can be owned except a right. Traditional financial assets involve complex intermediary structures that erode property rights. Investors in financial assets only hold limited property rights, such as economic rights (i.e., dividends), or certain ownership rights (i.e., vote). All other property rights associated with the assets are owned by a web of financial institutions acting as intermediaries.

Bitcoin offers full autonomy over holdings and transactions without regulated intermediaries or counterparty risk. Bitcoin is an asset class with no legal risk at its core, unlike real estate, modern currency, or stocks and bonds. Blockchain technology and cryptocurrencies have fundamentally altered the landscape of digital transactions and ownership. These technologies offer a form of digital ownership that is more direct and potentially more secure than traditional financial instruments. Technology created a new paradigm: new assets and eventually new

digital money (asset-based, as opposed to credit-based). Bitcoin is the purest expression of individual property rights in the twenty-first century—with property rights not enforced by any nation's legal system but by code.

To preserve liberty, certain technological designs are better than others. Among the design aspects of technologies favorable toward liberty are open-source code and the inability of one or a small group to direct how code will be used. Cryptocurrencies, particularly Bitcoin, embody these liberty-preserving characteristics. Blockchain technology is regulated by code. No laws affect the way the code can be used.

As a result, regulatory efforts for cryptocurrencies focus mostly on intermediaries and the use of the technology rather than the technology or infrastructure itself. For certain decentralized networks secured by code, regulatory oversight is no longer needed. After all, such oversight was initiated to protect investors from the risks associated with handing their money over to intermediaries, and these do not exist in decentralized networks.

Smart contracts, as self-executing programs on blockchain networks, present both opportunities and challenges in the realm of contract law. Their automated nature promises efficiency but raises questions about contract formation, interpretation, and enforcement. In contract theory, the term 'incomplete contracts' highlights the difficulties in creating agreements that can account for all future contingencies. Law recognizes that reality is unpredictable and employs open concepts like 'reasonability' and 'proportionality.' Blockchain technology, particularly smart contracts, can be inflexible once deployed, leading to issues when circumstances change. Without a legal framework, reconciling smart contracts with traditional contract law will be difficult. The Smart Contract Block is the most suitable option.

Tokenization is the process of linking the economic value and rights of real or digital assets to blockchain-based tokens. This process allows for the creation of digital representations of various assets, from real estate to financial instruments. However, it introduces complex regulatory challenges. There is no 'link' between a token and an asset unless connected by legal context. Consequently, certain forms of tokenization venture into the realm of regulated financial services. Most tokenization schemes will have to rely on regulated intermediaries and custodians to (centrally) own the assets on behalf of the token holders. Additionally, existing governing laws—such as those regulating IP—limit tokenization. From a legal point of view, there is a significant difference between tokens that are native to the blockchain and those representing 'off-chain' assets (the latter rarely can be considered decentralized).

DeFi offers an open and global financial system built on blockchain technology, accessible to anyone with a wallet and Internet connection. DeFi has emerged as a

novel financial system offering financial services without traditional intermediaries. DeFi offers benefits such as user control, transparency, global access, minimized insolvency risks, and innovation potential. Unfortunately, it faces significant regulatory scrutiny due to its decentralized nature and the provision of non-compliant financial services. DeFi's characteristics may be incompatible with existing regulatory frameworks designed for intermediary-based systems. However, DeFi is here to stay, and secure code-based DeFi protocols do not require the same level of investor protection as traditional financial services.

Corporations are legal persons recognized by law as capable of having rights and duties. To determine the applicable laws, legal persons are tied to physical locations. DAOs represent a form of organizational structure, utilizing blockchain technology for governance and decision-making. These organizations grapple with issues of legal recognition and liability, as they lack the hallmarks of legal personhood. Certain DAOs use a legal wrapper, but this compromises their decentralized nature. By reducing legal complexity, DAO technology could serve a broader range of applications than it does today.

Jurisdiction encompasses both the authority to rule on specific cases and the geographical limits within which this authority can be exercised. The tension between physical jurisdictions and cyberspace presents challenges for regulating blockchain and cryptocurrency activities. This tension highlights the need for innovative approaches to jurisdiction and governing laws in the digital age, with attempts being made with blockchain-based jurisdictions (albeit with limited success). The most promising option is a jurisdiction by consent.

Arbitration could serve as a method for resolving disputes in the blockchain space, but it requires a proper legal framework to be effective. Specific arbitration frameworks exist but struggle to fully address the unique characteristics of blockchain-based transactions and smart contracts. UNCITRAL is an unlikely fit. UNIDROIT may be able to accommodate blockchain technologies, but this requires potential revisions or fresh interpretations. Alternatively, English law serves as a tried-and-trusted solution. Fully online arbitration is already possible, and decentralized arbitration is being worked on. The technology and laws are in place to set up a Decentralized Legal System.

§ 14.1. Legal Empowerment Through Blockchain

This chapter highlighted the difficulties in applying traditional legal concepts to decentralized, borderless systems. It touched on issues of jurisdiction, contract law, and property rights. One theme consistently resurfaced: the interaction of

blockchain technologies and cryptocurrencies with existing legal frameworks. Determining applicable law for blockchain transactions and smart contracts is challenging. Up until now, the crypto industry has simply ignored the law until the law came knocking.

Law requires human interpretation to consider context and relevant circumstances. Blockchain technologies, however, execute based on predefined conditions without the ability to consider anything. The industry's primary response to this discrepancy is doubling down on automation: replacing corporations with DAOs, converting assets into digital tokens, and substituting agreements with smart contracts. This approach does not address the fundamental issue. Moreover, technology should support human interaction, not replace it.

Widespread adoption of blockchain technologies, especially those involving international transactions, depends on developing appropriate legal frameworks that assign rights and duties. Existing legal frameworks are tied to specific jurisdictions and territories. Blockchain technology operates globally and is not confined by national borders. This results in challenges in determining applicable laws. How, then, do we reconcile global, decentralized systems with local laws and regulations? The existing power structure demonstrates clear intent: those in charge want intermediaries controlling the technology's use. As a result, the regulatory frameworks emerging—especially in international law—do nothing to empower the peer-to-peer nature of decentralized networks. If a fair and empowering legal framework for the decentralized world is ever to emerge, it has to be built from the bottom up.

The crypto industry thus faces two legal challenges. The first is to ensure that governing laws do not suffocate the emerging technology. The second is to draft laws that empower crypto projects and honor the decentralized nature of the technology. Legislative work must be done on private laws that support blockchain technology, as well as on governing laws to ensure financial liberty and the ability to self-regulate.

For the next stage of development in crypto, the proper role of law needs to be addressed. Merging law and tech cannot be done with just code or law—a bridge is needed. A bridge of Decentralized Law. The final section of this book spells out how to build it.

SECTION III

Decentralized Law

XV

The Future of Decentralized Technology and Law

> *"We have it in our power to start the world anew."*
> ~Thomas Paine

The time has come to imagine the future and build it! The next wave of liberty and globalization will come from decentralized technology and voluntary cooperation. Modern technology aligns surprisingly well with classical legal thought and can help ensure a fair legal system of balanced rights and duties. Law is more than government dictates, and blockchain technology is more than a monetary phenomenon. Can the two merge while preserving both natural rights and the established international legal framework? Can we turn blockchain technology into law?

This chapter discusses the crucial components of the legal system of the future. Decentralizing the legal system faces multiple hurdles. Ideas and practices that are incompatible with (financial) liberty have crept into law-making. We cannot have a peer-to-peer economy without addressing these issues first. This chapter then examines the four law sources and their possible future roles. After that, it provides an overview of the legal instruments and technologies required to make that future a reality. The remaining chapters in Section III provide a detailed analysis of each component and a roadmap to make it happen.

§ 15.1. Building Blocks of Twenty-First Century Law

> *"From the fact that the rule of law is a limitation upon all legislation, it follows that it cannot itself be a law in the same sense as the laws passed by the legislator."*
>
> ~F.A. Hayek[804]

Hayek's *The Constitution of Liberty* provides a useful start in understanding the requirements of a just legal system. Because without liberty of action, he argued, progress would be impossible. Liberty requires that, in a society, coercion by others be reduced as much as possible. One function of government is to prevent individuals from coercing other individuals, but then the government itself also must be prevented from using coercion improperly. A free society empowers individuals to develop and follow their own life plans.[805] His ideal rule of law requires certain characteristics: laws must be general, they must be known and certain, they must apply equally to all, they must provide for an independent judiciary, they must limit the executive by legislative and judicial rules, and they must safeguard fundamental rights and civil liberties.[806]

If individuals know what rules they can count on, they are better able to predict the outcome of their actions, determine their responsibilities, and use their knowledge effectively. Known and certain laws are vital to economic life. They enable people to foresee with a high degree of confidence what collaboration they can expect from others, thus facilitating a spontaneous order.[807] It is the task, then, of the lawgiver not to set up a particular order but merely to create conditions in which an orderly arrangement can establish and ever renew itself.[808]

Liberty, in summary, is the essential ingredient that allows people to build and thrive. It enables them to establish guiding principles based on their natural life path and develop an independent morality for assessing information and determining the optimal course of action for themselves, their families, and their communities. Allowing people to arrange their affairs under a fair set of equal principles should be the objective of our system. We need a solid foundation based on liberty.

804 Hayek, F.A., "*The Constitution of Liberty,*" (Routledge & Kegan Paul, England, 1960), page 205.
805 Miller (2010), page 17 [Author: paragraph edited for readability].
806 Miller (2010), page 19 [Author: paragraph edited for readability].
807 Miller (2010), page 123 [Author: paragraph edited for readability].
808 Miller (2010), page 123 [Author: paragraph edited for readability].

> *"That government is best which governs least."*
> ~Henry David Thoreau

Balancing of Interests

The ancient Greeks argued for the pursuit of virtue in the population and chose their leaders from the best among them. The Chinese placed their hope in the cultivation of a virtuous ruler. The problem with virtue is that it is an abstract ideal: it is hard to measure, and its meaning fluctuates over time. Frankly, a country of virtuous individuals and faultless leadership is yet to emerge.

The modern Western foundation for ensuring harmony is equality before the law. A sound law empowers all in a society equally. It keeps itself isolated from contemporary fashions and thus functions as society's anchor over time. It prevents the favoring of the interests or ideology of one group over the others.

Political systems are divided into three branches: the legislative, the executive, and the judiciary. This has been a massive improvement compared to when kings combined all powers of legislation and judgment in one individual. Unfortunately, the expanding role of (international) bureaucracy has led to coordinated efforts that prioritize institutional ambitions over legal equality. The American Founding Fathers worried precisely about this problem and addressed it with the Bill of Rights: a document based on natural law principles that codified absolute individual rights that cannot be infringed on by the government (or anyone else).

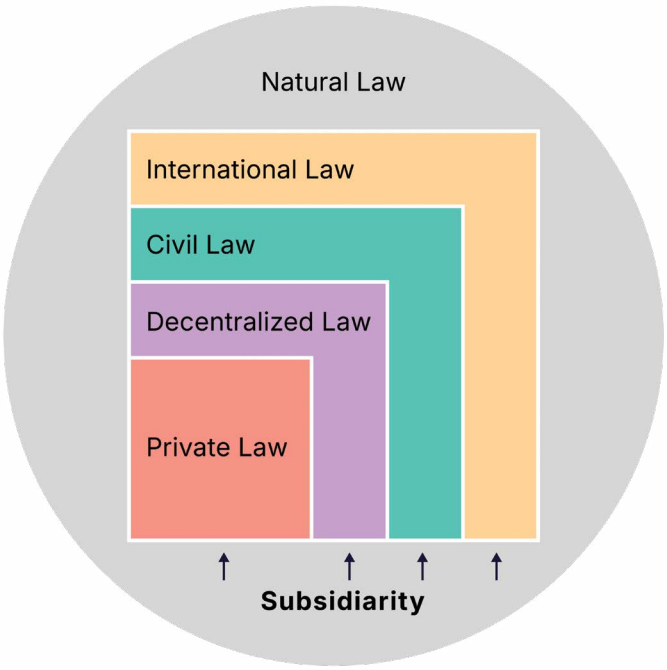
There are thus two proven ways of ensuring that a legal system balances the interests of all actors. Firstly, by ensuring equal liberty for all at a foundational level—for example, by a constitution or a bill of rights. Secondly, by ensuring that when the law adjusts over time, it is done according to the principles of separation of powers. Our system must address both.

Subsidiarity

In traditional international law, the individual played an inconspicuous part because the international interests of the individual and his contacts across the frontier were rudimentary. With the invention of the Internet especially, this is no longer the case. We are now all connected. Moreover, international law now directly influences our individual lives. Yes, the interdependence of states requires coordination. But it should never jeopardize the liberty of the individuals who comprise these states. How do we facilitate this intense global cooperation without compromising equality and justice for all?

One concept that deals with this conundrum is called subsidiarity. According to George A. Bermann, an authority on comparative law, subsidiarity expresses a preference for governance at the most local level consistent with achieving the government's stated purposes.[809] He explained that it ensures self-determination and accountability by allowing people a greater opportunity to shape rules governing their personal and business affairs when these rules are made at levels of government where they have effective representation. The opportunity to participate increases the likelihood that resulting laws and policies will reflect the population's interests and enhance the individual's sense of dignity and autonomy within the larger community.[810]

Subsidiarity offers a community the flexibility to reflect more closely its unique combination of circumstances—physical, economic, social, moral, and cultural—at any given moment. It enables the community to respond appropriately to changing circumstances. It can help preserve a community's sense of social and cultural identity and foster diversity within the larger polity. A further virtue of subsidiarity is its tendency to preserve the formal allocations of power between various states.[811]



Looking at subsidiarity across the hierarchy of laws, each layer has its own authority and aims. International law concerns itself with international affairs, such as international disputes, war and peace, and trade. National codes regulate

809 George A. Bermann, "*Taking Subsidiarity Seriously: Federalism in the European Community and the United States,*" (Columbia Law Review, Vol. 94, March 1994, No. 2.), page 339.

810 Ibid., pages 340-342, [Author: summarized various paragraphs].

811 Ibid., pages 340-342, [Author: summarized various paragraphs].

national affairs; examples include land registration, the punishment of criminals, national defense, and family law. Local issues can be regulated by the community; examples include zoning laws and rules for garbage collection. Finally, private law regulates private affairs, examples being business transactions and social organization. Moreover, every level of legislation has an appropriate level of detail; the higher levels of law set broad, general principles, and the lower levels provide more details. As such, human rights declarations are well-known, broad principles, and private labor contracts provide exact details of what is expected of each party within a limited context.

The concept of subsidiarity happens to be one of the founding principles of the EU, acquiring official status in the Maastricht Treaty, which came into effect on November 1, 1993.[812] In practice, the EU includes statements in its legislation that the subsidiarity principle was considered and that the party most suited to regulate a specific topic is the EU itself.[813] As a result, the EU lifts all law-making to the supranational layer, since it usually finds a reason why a regulatory area should fall under its competencies. This turns the subsidiarity principle upside down, achieving the opposite of the original intention.

Subsidiarity demands an updated approach. The world's legal system, in its next stages of globalization, should have strong universal principles of liberty as its foundation to which all laws are subjected, strong but limited national and international frameworks to govern national and global interests, and numerous

812 "*Treaty on European Union,*" (Document 11992M/TXT, OJ C 191, 29.7.1992, p. 1–112 (ES, DA, DE, EL, EN, FR, GA, IT, NL, PT)), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A11992M%2FTXT, Article 3B: "*The Community shall act within the limits of the powers conferred upon it by this Treaty and of the objectives assigned to it therein. In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community. Any action by the Community shall not go beyond what is necessary to achieve the objectives of this Treaty.*"

813 REGULATION (EU) 2022/2065 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, of 19 October 2022, on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act): "*Since the objectives of this Regulation, namely to contribute to the proper functioning of the internal market and to ensure a safe, predictable and trusted online environment in which the fundamental rights enshrined in the Charter are duly protected, cannot be sufficiently achieved by the Member States because they cannot achieve the necessary harmonisation and cooperation by acting alone, but can rather, by reason of territorial and personal scope, be better achieved at the Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the* [in 2012 consolidated] *Treaty on European Union. In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives.*"

subtle forms of regulation for unique circumstances and industries at the level of private cooperation (supported by Decentralized Law). Moving globalism into the realm of private and voluntary cooperation allows for tighter and more specialized cooperation while leaving liberty and the existing legal system intact—a painless revolution indeed!

Between Flexibility and Rigidity

Lessig observed that legal systems generally consist of two elements. The first is permanent rules, codified in a constitution, of both basic natural rights and the rules governing the law itself. The second element consists of variable law, which allows for adjustments in the rules applicable to society and its evolution. In most societies, these laws are maintained by democratically elected governments. Such a system offers both the stability of foundational codified principles and transformative flexibility for adjustment to an evolving landscape.[814]

Unsurprisingly, Bitcoin operates under similar principles: certain aspects are fixed in code and remain unchangeable, while select variables can be adjusted by consensus to meet community demands. Decentralized Law can strive for the same ideal by using blockchain to codify immutable core principles of liberty, equal interests, separation of powers, and subsidiarity while empowering DAO technology to participate in the law-making process.

§ 15.2. Legal Barriers to Peer-to-Peer Finance

> *"Laws were most numerous when the commonwealth was most corrupt."*
> ~Tacitus

The original writers of law were men who stood with both feet on the ground. They commanded armies, owned land, managed staff and estates, and engaged in politics and business. They philosophized about improving humanity and establishing peaceful coexistence and formalized their ideas. Cicero, Madison, and Vattel designed legal systems that were fair and just and practical in the real world. Austin, Hart, and especially Raz crafted elaborate theories for academics

814 Lessig (1999), page 213: "*Our Constitution has both regimes within it. The Constitution of 1789—before the first ten amendments—was a trans formative constitution. It "called into life" a new form of government and gave birth to a nation. 1 The Constitution of 1791—the Bill of Rights—was a codifying constitution. Against the background of the new constitution, it sought to entrench certain values against future change.*"

and the poor souls who wandered into the wrong lecturing hall on their way to learning 'real,' imposed law. Modern legal scholars often argue as if they are not part of society, describing it from the outside as a biologist would. Their work offers little practical value for the everyday legal practitioner and little understanding for ordinary people.

Currently, only niche scholars contemplate what the law ought to be, and their ideas mostly remain an intellectual exercise. Consequently, few in law question law's sources and direction, and even fewer see the larger picture. This results in an increasingly complex legal system that no single person understands. Dutch financial journalist Arno Wellens calculated that on some days the EU passes more words of legislation than exist in the Quran and Bible combined.[815] This avalanche of laws poses many creative threats to basic liberties and democratic principles—and this process is ramping up. Before we can establish a decentralized economy, we must address three hurdles: positivist fundamentalism, internationalist subversion, and regulatory incompatibility.

Positivist Fundamentalism

Recent history witnessed the rise of the technocratic, positivist mindset. As a result, those in power increasingly dictate how others should live and behave in minute detail. At the time of this writing, fundamental rights and liberties are steadily sacrificed to vague and rapidly changing global goals. As clearly explained in Section I of this book, our legal systems were founded on two natural law principles: that human beings are equal and that law should facilitate their free interaction. However, this idea is no longer universally supported. Moreover, modernity lacks a foundation to base a fair and equal legal system on. Justice, compassion, magnanimity, and love cannot be expressed in numbers or in scientific models that calculate the greatest good or largest pain. These virtues cannot be expressed in computer code, either. This inability to focus on what makes life 'human' becomes increasingly dangerous as AI and data-driven policies permeate more aspects of existence.

The ability to exercise one's natural rights without the inhibition of violence, duress, and coercive restraint initiated by others is the greatest possible gift of a legal system. The achievement of liberty for the individual allows a society of equal beings in voluntary cooperation to develop and thrive. However, the endless variations in political and economic systems all pursue goals that distract from this fundamental purpose of the legal system. Legal positivism makes this possible and needs to be reined in.

815 "*Arno Wellens: Parlementaire show verbergt gevaar CBDC | GKG 57,*" (GoldRepublic YouTube Channel, episode 57), accessed on Jan 7, 2024, https://www.youtube.com/watch?v=KyUZ_u6hvBY&feature=youtu.be.

International Subversion

The second major hurdle is that laws and regulations are increasingly set at a level above national governments. This eliminates the system of checks and balances fought over for millennia and replaces it with an opaque and unaccountable system. Such a system is suitable for regulating certain international matters but is unfit to govern our everyday lives.

International law was not designed for large international organizations (IOs) to set public policy—it evolved into this role. As a result, IOs now operate in contradiction to their noble principles. They view the law merely as a tool to achieve their goals. Those claiming the gravest emergencies receive the most attention, funding, and leeway to subvert the legal system through rapidly expanding treaty networks and supranational bodies. IOs constantly seek to justify their existence and expand their jurisdiction. Civil rights, human rights, and state sovereignty are increasingly sacrificed on the altar of global ambitions. This must stop.

From legal and philosophical perspectives, modern international legal frameworks pose numerous problems. The first is the illusion that small groups of technocrats can properly regulate local affairs for all people all the time. The Soviet Union demonstrated that such centralized control is doomed to fail. The second category of problems stems from the absence of normal checks and balances: a functioning court system, a democratic means to influence policy, and tools for securing liberty, to name a few. International law needs to be reined in as well.

Regulatory Incompatibility

Even if we accepted the international rules-based order as a new and improved form of administration, its current regulatory approach to cryptocurrencies fails fundamentally. International regulators approach Bitcoin as a financial institution. One fundamental promise of Bitcoin is its creation of an economic framework where individuals conduct transactions directly, eliminating the need for intermediaries. While some companies in the crypto space operate like financial institutions, the majority of open-source communities do not. In many cases, intermediaries introduce third-party risk where none existed before, contradicting the core objective of investor protection regulation. Some of the biggest crypto scandals of the early 2020s investment cycle did not originate from blockchains but from regulated intermediaries. Notorious cryptocurrency exchange FTX, branded as the "most regulated exchange" in the industry, resulted in the biggest loss of funds.[816]

816 Prentice, Chris, Berwick, Angus, Lang, Hannah, "*EXCLUSIVE How FTX bought its way to become the 'most regulated' crypto exchange,*" (Reuters, November 18, 2022), accessed on Jan 6, 2025, https://www.reuters.com/technology/exclusive-how-ftx-bought-its-way-

The stance of international regulators is captured best in the Financial Stability Board's (FSB) recommendation to follow the "same activity, same risk, same regulation"[817] approach. The FSB fails to distinguish between the traditional debt-based monetary system dependent on over-leveraged intermediaries and the peer-to-peer payment network characterized by self-owned assets without counterparty risk. The situation compares to requiring all emails to be routed through the post office merely because writing emails resembles writing letters. This tells us enough of what we can expect going forward. In short, the peer-to-peer nature of cryptocurrencies is incompatible with the objectives of international regulators.

Blockchain technologies require private transactions for smart contract interactions and gas fee payments. Thus, decentralized technology cannot exist without the ability to transact from private wallets. Maintaining the ability to privately hold, use, and freely trade cryptocurrencies without intermediaries remains essential to the future of this technology. No global legal frameworks support cross-border peer-to-peer transactions and blockchain technologies. States and international regulators lack the ability, desire, and detailed knowledge needed to create such frameworks. Like open-source software licenses, the standards facilitating the peer-to-peer economy must be developed by the community itself. As a result, decentralized projects have no other choice than to resort to small, tailor-made legal frameworks built from the bottom up. The industry must create its own laws. However, because most crypto projects operate at the private law level, we cannot envision a future for the decentralized economy without addressing the governing laws above it first.

§ 15.3. The Four Sources of Law in a Decentralized World

> *"The optimal protection for spaces in cyberspace is a mix between public law and private fences."*
>
> ~Lawrence Lessig

We must think about the ideal source of law in a decentralized world. To recap, there are four sources of law. First is natural law: universal for all humans and expressed in equal natural rights and duties. Then there is civil law, created by specific governments. International law originates from treaties, customs, and IOs. Private law emerges through consensual arrangements between private parties. In our current situation, private law and natural law (expressed in human rights and

become-most-regulated-crypto-exchange-2022-11-18/

817 FSB, *"Regulation, Supervision and Oversight of Crypto-Asset Activities and Markets – Consultative document,"* (Financial Stability Board, 11 Oct 2022), page 1.

liberty) have diminishing influence compared to top-down government-enforced civil and international law. To achieve this more balanced legal system, let us examine each source of law and assign each a proper role.

Invoking Natural law

As widely argued throughout this book, natural law—the idea that all human beings possess equal basic liberty and natural rights to protect it—forms the foundation of the legal system. The criticisms against the more fundamentalist interpretations of natural law have been mentioned. The reality is that natural rights appear, at least on paper, in almost all legal systems and constitutions throughout the world. They serve as core principles for IOs like the UN and EU and appear in laws across the Islamic world, the African continent, and former European colonies. To establish the rule of law, equal treatment before the law is the main ingredient. Natural rights supply the basic liberty humans need to thrive. Natural law stands as the most fundamental aspect of legal systems—a role that will persist into the future.

Natural law was not the product of a single religion or a single authority. Grotius taught that natural law belongs to every human being. Each has the right to institutions that streamline and enforce these rights. Natural law is thus ultimately a decentralized law, and this reason alone makes it the prime candidate to serve as the foundation for a blockchain-based legal system. To give this concept additional weight, a decentralized universal human rights code should ensure liberty by existing on nodes across blockchains, making its erasure impossible. Universal, decentralized and immutable law meets universal, decentralized and immutable technology.

Formalizing Civil Law

Civil law is understood as the law produced by the legitimate government of a state. However, the authority of individual states erodes in relation to international institutions, NGOs, and big businesses. The well-underway process of legal globalization and the establishment of supranational governance layers destroys the *trias politica* and replaces it with raw power. International institutions wage a silent war against the concept of the nation-state through treaty-based mechanisms, operating largely unchallenged. At the same time, decentralized technologies chip away at one of the major pillars of state authority: the power to issue and control money. State authority is being corroded from above and below. Is this a good thing?

Despite anarchistic opinions prevalent within the crypto community, this is currently how humanity is organized: in nation-states. And despite its imperfections,

representative government serves as the primary mechanism through which we establish and protect rights and duties—and where 'collective free will' can be expressed. Processes exist at this level to steer policy based on people's consent. Reject the civil law and you reject its protection. In civil law, property rights are defined and secured. The state fights crime and punishes criminals. Enforcing contracts is only possible with functional courts and enforcement authorities operating within states. At this level, checks and balances operate, and a division of power is codified. Any attempt to replace the state runs into the same considerations plaguing humanity since Aristotle: who makes and enforces the laws? Eliminating state power would result in problems greater than blockchains can solve.

First, we must recognize that citizens delegate to state governments the authority to codify and regulate natural rights. Therefore, rights delegated through international treaties should not infringe on civil rights. Such delegations of power should be treated as a change to the social contract and governed as if it were an amendment to the constitution. Second, we must recognize our millennia of well-established procedures for governing states. As such, there cannot be a global executive, especially one replacing democracy, without proper safeguards like divided law-making and executive powers and a functioning judiciary. Given that this system has been impossible to achieve even in Europe, it is unthinkable to institute it globally. Replacing an elected, accountable national government with an unelected, unaccountable international one is an absurd practice—a voluntary move back to the age of empires.

A state cannot consider its positive law as decentralized, as its laws are, by definition, attached to one place and controlled by one sovereign. Civil laws are developed over an extended period, often through social struggles, and according to local custom and conviction. Civil laws, therefore, cannot be decentralized. The only thing that could be (somewhat) decentralized is the way law comes about, such as by using the 'DAA tools' introduced later in Section III to include the people in the drafting of laws. However, this would be mostly a technological improvement of an existing process—not a legal revolution. As a final point, the state's role could be reduced in favor of a more decentralized approach that would reduce the areas in which the state makes laws.

Limiting International Law

We need to set certain boundaries for what can and cannot be regulated at the international level. There are two extremes: only matters concerning two states (peace, war, commerce) on one side and limitless interference in individual lives on the other—the first impractical, the second undesirable. Naturally, sovereign states are free to engage in any agreement they see fit. However, there needs to be

a balance between multiple parties' interests (for example, between big business or NGOs and individual rights). Moreover, we need to separate ideology and law.

The fundamental principle is that international law is designed to deal with states, institutions, and other sophisticated actors. It should not micromanage individuals or legislate every aspect of human existence—for this is why national governments, with their checks and balances, exist. The decentralized nature of international law results in legislation and depends heavily on government executives' universal agreement, which unsurprisingly often favors increasing their control at the expense of individual liberty. Through treaties, bureaucrats have crafted a supranational layer that governs a wide range of topics. This poses an undeniable threat to both liberty and the people's ability to express their will. As a result, international law now threatens liberty.

Natural law can function as a vital anchor against which to judge the validity of international law. However, its guidance alone is not enough. In the end, states shape and define our legal systems. Only the state allows for the expression of the will of the people. We thus must introduce checks and balances to international law and institutions.

Unleashing Private Law

> *"In the allowance of new law the state may hearken to other voices than its own."*
>
> ~John Salmond

One of the main conclusions of this book is that laws are created on different layers. The fairest, most balanced, and most empowering legislation is that which is passed on the individual layer between consenting individuals. Private laws offer the ideal avenue for regulating this space. Those active in this industry have the greatest interest in regulating their activities correctly. However, to be able to do this, the technology to create private laws and standards must be developed. This is explored in the remainder of the book.

§ 15.4. Summary and Interpretation

The legal system has been built up around individual rights and duties. The clearest expression of the individual legal system is the concept of individual liberty. This is the core of any legal system. At the same time, humans are social beings. No one can live alone, and no legal system can treat individuals as isolated from the

rest. The law streamlines the interaction between individuals. It operates through individual contracts, state-level social contracts, and international treaties governing interactions between states.

In our current legal system, positive law has replaced natural rights and individual liberty with top-down regulation. International law has subverted civil law with the same concept. International regulators are now using the legal system to enlist private parties to directly enforce their objectives. Addressing these three challenges is essential for establishing both financial liberty and economic decentralization. The logical conclusion is that the legal system needs the following:

- A legal instrument cementing individual liberty in a universal and immutable way.
- A legal instrument protecting civil rights from international subversion.
- Objective financial rights and duties by which invasive regulation can be assessed.
- Technologies that empower global legal cooperation at the private law layer.

Blockchains store data in an immutable fashion. This has more use cases than just transactions. Simple but effective technologies allow for the uploading of law to the blockchain. And this brings with it a variety of use cases and innovations, each to be discussed in a separate chapter.

The core is a Decentralized Bill of Liberties, empirically extracted from the most universal expressions of natural rights. A Declaration of State Rights and Duties sets subsidiarity boundaries between undemocratic globalist institutions and legitimate governments. The concept of Freedom of the Nodes proposes treating decentralized networks similarly to open oceans, securing free access for all. The Decentralized Legal System provides a framework for all decentralized networks to design their own Decentralized Law and governance systems. Finally, the decentralized autonomous association is a modification of the DAO structure that permits Consensus Jurisdictions and authoritative institutions to determine regulatory standards using blockchain technology.

A more globalized and decentralized world needs legal frameworks. The current (international) legal order seems unable to provide this. It is time for this industry to take matters into its own hands!

XVI

Decentralized Bill of Liberties

> *"Now I know of only two methods of establishing equality in the political world; every citizen must be put in possession of his rights, or rights must be granted to no one."*
>
> ~Alexis de Tocqueville

Immutable principles and a primary focus on securing individual liberty have formed the foundation of the best legal systems. There is no reason to depart from this. Establishing minimum liberties for individuals across all decentralized networks is the first step toward a more decentralized legal system.

Despite almost universal acknowledgment of human rights, controversy remains about what should be included in the concept. Naturally, there are wide variations in their codification, implementation, and result. This chapter first analyzes the historical development of rights—human rights in particular. It then examines how modern society enforces these rights and, finally, their relationship to a decentralized network of equals. This research reveals that we need a modern, universal list of essential liberties that is enacted independently of existing jurisdictions. The resulting Decentralized Bill of Liberties (DBoL), enacted on the blockchain, serves as the foundation of future (decentralized) legal systems.

§ 16.1. Rights

Grotius observed that all individuals have rights attached to their person as a form of property. Man is born a sovereign and free individual, capable of pursuing his interests without permission or assistance from the state or any other authority. But how did this concept evolve from the world of ideas to become one of the fundamental principles of law?

Kant's previously discussed authoritative work summarized what we now know as 'classical liberalism,' which dictated that all human beings must be treated as ends in themselves and never as means only. Philosopher and writer Roger Scruton (1944–2020) concluded that Kant meant that one's freedom to act must respect the freedom of others. No one can do as they please; rather, each person may exercise freedom only to the extent it does not limit the freedom of others. In describing rights as 'human' rather than 'civil,' we invoke the natural law and, with it, the universal principles that set limits to legislation in every place and time—a universal constraint on government. This individual sovereignty translates into law as a system of rights: the right to life, limb, and property; the right to proceed peacefully about one's purposes; the right to engage in lawful relations with others; and so on. For Kant, the concept of 'right' was secondary to that of duty. What gives reality to rights is a duty to respect them. One can claim rights only if one is prepared to pay the price, which is the acceptance of the very same duties that one imposes upon others through one's own claim.[818]

Hegel considered it imperative that we all should act as persons capable of rights and respect other persons likewise.[819] Moreover, in formal 'right,' there is no question of particular interests, of personal advantage or welfare, any more than there is of the particular motive behind personal volition, of insight and intention.[820] The unconditional commands of abstract right are restricted, because of its abstractness, to the negative: 'Do not infringe upon personality and what personality entails.' The result is that there are only prohibitions in the sphere of right;[821] rights protect the person but do not create anything for him. Moreover, they provide him with a duty binding to his will as they give substance to his own being.[822] This duty provides him with liberation, firstly from natural impulses and secondly from indeterminate subjectivity devoid of actuality.[823] It provides a predictable framework in which he can live his life. Human freedom is fulfilled when belonging to an ethical order.[824] Within this order, he has rights in so far as he has duties and duties in so far as he has rights.[825]

818 Scruton (2010), Chapter Seven, Enlightenment and Law, [Author: paragraph is the summary of the subchapter "Human Rights"].
819 Hegel (1820), First Part: Abstract Right, § 36.
820 Ibid., First Part: Abstract Right, § 37.
821 Hegel (1820), First Part: Abstract Right, § 38.
822 Ibid., Third Part: Ethical Life: § 148.
823 Ibid., Third Part: Ethical Life: § 149.
824 Ibid., Third Part: Ethical Life: § 153.
825 Ibid., Third Part: Ethical Life: § 155.

Modern Rights

Salmond provided a useful starting point for understanding modern rights by first defining two closely related terms. The first is a wrong, which is an act contrary to the rule of right and justice. He distinguished between a moral wrong, being contrary to natural justice, and a legal wrong, being a violation of justice according to law.[826] He pointed out that moral and legal standards often differ, though historically, effective legal systems have sought to align them.

The second concept closely associated with rights is duty. Salmond defined duty as an obligatory act whose opposite constitutes a wrong. Duties, like wrongs, are of two kinds, being either moral or legal. A moral or natural duty is an act the opposite of which would be a moral or natural wrong. A legal duty is an act the opposite of which would be a legal wrong. These two classes are partly coincident and partly distinct. A duty may be moral but not legal, or legal but not moral, or both at once.[827]

Salmond argued that rights emerge from the balancing of competing interests. Since the interests of men conflict with each other, it is impossible for all to receive rightful recognition. The rule of justice selects some for protection, and the others are rejected. The interests which receive recognition and protection from the rules of right are called rights. A right, he concluded, is any interest, respect for which is a duty, and the disregard of which is a wrong.[828] All that is right or wrong, just or unjust, is so by reason of its effect upon the interests of mankind, that is to say upon the various elements of human well-being, such as life, liberty, health, reputation, and the uses of material objects. Every wrong, therefore, involves some interest attacked by it, and every duty involves some interest to which it relates and for whose protection it exists.[829]

According to Salmond, liberties are the benefits which one derives from the absence of legal duties imposed upon oneself.[830] The sphere of legal liberty is that sphere of activity within which the law is content to leave one alone. The term right is often used in a wide sense to include such liberty, but the interests of unrestrained activity, recognized and allowed by the law, constitute a class of legal rights clearly distinguishable from those which are already considered. Rights of the one class are concerned with those things which other persons ought to do; rights of the other class are concerned with those things which one may do for himself. The

826 Salmond (1913), § 70. Wrongs.
827 Ibid., § 71. Duties
828 Ibid., § 72. Rights
829 Ibid., § 72. Rights
830 Ibid., § 75. Liberties.

former pertains to the sphere of obligation or compulsion, the latter to that of liberty or free will.[831]

Salmond further introduced positive and negative rights. A positive right corresponds to a positive duty and stipulates that he on whom the duty lies shall do some positive act on behalf of the person entitled. A negative right corresponds to a negative duty and is a right that the person bound shall *refrain* from some act which would operate to the prejudice of the person entitled.[832]

Holland distinguished rights as those active against a definite person or persons or against all persons indefinitely. A right of the definite kind is a right *in personam*, of the indefinite kind a right *in rem.*[833] Furthermore, he introduced primary rights, or rights antecedent, that stand on their own but need secondary rights, such as remedial or sanctioning rights, in support.[834] Holland further observed rights existing either at rest or in motion. The latter means that a right might terminate its connection with the person in whom it resides, perhaps by being transferred or ceasing to exist due to an act.[835]

American jurist Wesley Newcomb Hohfeld (1879–1918) synthesized these ideas into a model showing the interconnection of legal relationships like rights. Hohfeld argued that the term 'rights' tends to be used indiscriminately to cover what, in a given case, may be a privilege, a power, or an immunity rather than a right in the strictest sense.[836] He defined a right as one's "affirmative claim" against another and a privilege as one's "freedom from the right or claim of another." Similarly, a power is one's "affirmative control" over a given legal relation against another, whereas an immunity is one's "freedom from the legal power or control of another regarding some legal relation."[837] He organized these concepts into a scheme of jural relations showing opposites and correlatives. For example, the opposite of a privilege is a duty.[838]

831 Ibid., § 75. Liberties.

832 Ibid., § 80. Positive and Negative Rights.

833 Holland (1916), Chapter IX – the Leading Classification of Rights, III. Upon the limited or unlimited extent of the person of incidence.

834 Ibid., Chapter IX – the Leading Classification of Rights.

835 Ibid., Chapter X – Right at Rest and in Motion

836 Hohfeld, Wesley N., "*Fundamental Legal Conceptions - As Applied in Judicial Reasoning and other legal essays by Wesley Newcomb Hohfeld,*" (Yale University Press, New Haven, 1920, Edited by Walter Wheeler Cook), Fundamental Jural Relations Contrasted With One Another, page 36.

837 Ibid., Introduction, page 7.

838 Ibid., Fundamental Jural Relations Contrasted With One Another, page 36.

Understanding the specific meaning of a right is crucial for comprehending corresponding duties. Within this scheme, what we earlier discussed in the book as basic natural rights qualify as privileges, which Hohfeld equated with liberties.[839] How do human rights compare?

§ 16.2. Human Rights

Human rights are the most widely known, accepted, and universal interpretations of natural rights. A leading figure in the push for human rights was Lauterpacht. As an international law authority, he played a vital role in defining the crimes with which the perpetrators of the Holocaust would be charged. One of Lauterpacht's key contributions was developing the legal concept of 'crimes against humanity.'[840] To restrict the government's ability to commit atrocities, he wrote *An International Bill of Human Rights* in 1945.[841] This work heavily influenced the concept of human rights and its future declarations and conventions.[842]

Lauterpacht's analysis of law parallels the analysis provided in the first section of this book. He based his ideas of universal human rights on natural rights and

839 Ibid., Fundamental Jural Relations Contrasted With One Another, page 42.

840 Vrdoljak, Ana Filipa, "*Human Rights and Genocide: The Work of Lauterpacht and Lemkin in Modern International Law,*" (European Journal of International Law, Volume 20, Issue 4, November 2009, pages 1163–1194), https://doi.org/10.1093/ejil/chp090. "*Through these efforts he facilitated the realization of individual criminal responsibility in international law and the formal recognition and prosecution of crimes against humanity by the international community.*"

841 Lauterpacht, Hersch, "*Human rights, the Charter of the United Nations and the International Bill of the Rights of Man : preliminary report / by H. Lauterpacht,*" (UN, New York, 12 May 1948), https://digitallibrary.un.org/record/564241?v=pdf: "*It may be useful for the members of the Committee to have before them a Draft which embodies the ideas of an International Bill of Rights in a single document and which formulates the principles on which this Report is based. For these reasons I venture to incorporate, in this last Chapter of the Report, my own draft of a Bill of Righta in the hope that it may be of assistance to the International Law Association and to the Brussels Conference in making their own contribution to the subject. The present draft is based on that circulated at the Prague Conference and taken from my book entitled 'An International Bill of the Rights of Man'.*"

842 Hoffman, Stefan-Ludwig, "*Human Rights in the Twentieth Century,*" (Cambridge University Press, New York, 2011), page 68: "*As suggested by A.W. Brian Simpson, the international legal academic Hersch Lauterpacht institutions in the area of human rights in the aftermath of World War II. He shrewdly used the International Law Society to ensure both the diffusion of his ideas among relevant national and international actors and the legitimacy of an organisation counting some 250 leading lawyers. At the UN, Lauterpacht has also been a central player, but in a somewhat indirect way.* [...] *the drafts supplied by the Foreign Office during the negotiation of the Universal Declaration were clearly marked by Lauterpacht's thinking.*"

natural law, observing the universal human law passed down since antiquity.[843] However, Lauterpacht was only one part of the broader movement in the 1940s working toward a system of equal rights for everyone. The push for global human rights had significant political backing as well.

American President Franklin D. Roosevelt represented one such force. His famous 'four freedoms' speech in 1941 advocated for humans "everywhere in the world" to have "freedom of speech and expression, freedom to worship God in his own way, freedom from want, and freedom from fear."[844] After Roosevelt's death in 1945, President Harry S. Truman appointed Eleanor Roosevelt, the former First Lady, as a delegate to the UN. She chaired the Commission on Human Rights (1946–1951) and played a major role in the drafting and adoption of the 1948 Universal Declaration of Human Rights (UDHR).[845]

Lauterpacht argued that natural law required positive enactment. He expressed frustration that the initial work produced only a *declaration* of human rights rather than a legally binding *convention*. Assigning rights without corresponding remedies and state duties represented, according to him, a fundamental and decisive ethical flaw in the structure and conception of the UDHR.[846] Contrary to his fears, the UDHR proved highly influential, as many nations later enacted additional instruments that made these ideals binding to states. Currently, human rights constitute a well-established, widely recognized body of law.

Human rights, Donnelly explained, are literally the rights that one has because one is human. The use of 'rights' in this context has two central moral and political senses: the first is rectitude, something being right (or wrong), and the second

843 Lauterpacht, Hersch, "*An International Bill of the Rights of Man,*" (Oxford University Press, Aug 2013). Ch.III The Law of Nature and the Inherent Rights of Man: "*It has been shown that the notion of the natural rights of man is of great antiquity and of significant continuity. It is now enshrined in the constitutional law of most States.*" Ch.IV The Law of Nations, The Law of Nature, and The Inalienable Rights of Man: "*The intimate relation between the law of nature and the notion of the inherent rights of man has not been a one-way movement of ideas. It has been shown that, in their rise and in their growth, the doctrines of natural law owed as much to the ideas of the inalienable rights of man as the latter owed to the former. We can trace the same mutuality of influence in the relations of international law and the law of nature.*"

844 Roosevelt, Franklin D., "*Annual Message to Congress on the State of the Union,*" January 6, 1941, in The Public Papers and Addresses of Franklin D. Roosevelt. 1940 Volume (New York: MacMillan, 1941), 663–672.

845 Caroli, Betty Boyd, "*Eleanor Roosevelt – American diplomat, humanitarian and first lady,*" (Britannica, Last updated July 24, 2024), accessed on Sep 11, 2024, https://www.britannica.com/biography/Eleanor-Roosevelt.

846 Lauterpacht (1950), 17. The Universal Declaration of Human Rights, page 421.

is entitlement, when something is owed to you or belongs to you in particular.[847] Exercise, respect, enjoyment, and enforcement are four principal dimensions of the practice of human rights,[848] making them a dynamic set of rights.

According to Donnelly, human rights are equal rights: one either is or is not a human being. Each has the same human rights as everyone else (or none at all). Moreover, he emphasized that human rights are inalienable. Inalienability does not mean that rights are absolute or can never be overridden by other considerations. Human rights, he said, are inalienable because one cannot stop being human, no matter how badly one behaves or how barbarously one is treated. Moreover, they are universal rights, in the sense that today we consider all members of the species Homo sapiens 'human beings' and thus holders of human rights.[849]

Man's moral nature, Donnelly continued, serves as the source of human rights. Human rights are needed not for life but for a life of dignity—a life worthy of a human being. People who enjoy human rights live richer and fuller lives. The UDHR, like any list of human rights, specifies minimum conditions for a dignified life. Human rights entitle people to social changes that fulfill the moral vision of human nature. Human rights thus can be seen as a self-fulfilling moral prophecy.[850]

While human rights norms have been largely internationalized and thus restrict the nation-state, their enforcement remains almost exclusively national. The human rights strategy to control state power has two main dimensions: negative and positive. Negatively, it prohibits states—both operating individually and collectively—from interfering in citizens' personal, social, and political lives. The positive enforcement of human rights requires the state to provide certain goods, services, opportunities, and protections.[851] Thus, Donnelly argued, a state that does no active harm itself is not enough. The state must also protect individuals against abuses by other individuals and private groups. Donnelly concluded that since the intrusive and coercive powers of the state have grown to now frightening

847 Donnelly (2013), Part I. Toward a Theory of Human Rights – 1. The Concept of Human rights, page 7.

848 Ibid., Part I. Toward a Theory of Human Rights – 1. The Concept of Human rights, page 8.

849 Ibid., Part I. Toward a Theory of Human Rights – 2. Special Features of Human Rights, page 10.

850 Ibid., Part I. Toward a Theory of Human Rights – 3. Human Nature and Human Rights, page 16, [Author: with legal positivism moral reasoning shifted from the flesh-and-blood individual to the abstract ideal. Here lies a subtle, but important distinction. As demonstrated by the Graph of Liberty, human beings are either equal under the law, or they are not. Modern ideology posits that human beings can only be equal if arbitrary abstract goals are met. Such goals exist not in reality but rather in the heads of the advocates, and generally consist of ever moving goalposts. Human beings can never achieve equality under such metrics].

851 Ibid., Part I. Toward a Theory of Human Rights – 6. The State and International Human Rights, page 34.

(technological) dimensions, an emphasis on controlling the state continues to make immense political sense.[852]

Lauterpacht classified three categories of human rights. The first category consists of personal rights. These have traditionally formed part of the bills of rights within the state. They include the right to life and inviolability of the person; freedom of speech, opinion, religion, association, and assembly; sanctity of the home and secrecy of correspondence; freedom from arbitrary arrest; proper safeguards in criminal trials; equality before the law; and freedom from discrimination on account of religion, race, ethical origin, and political opinion.[853]

The second category contains political rights. Examples are the fundamental right of man to government by consent—the right to be governed by persons freely chosen by the people.[854] While this ideal is a practical reality in Western countries, democratic rule is not universal; there are kingdoms, such as in Saudi Arabia, and communist regimes, such as in China.

The third category covers social and economic rights. During Lauterpacht's time, there was a wide and growing acceptance of the view that personal and political freedom is impaired—if not rendered purely nominal—unless its enjoyment is made practicable by a reasonable guarantee of social and economic freedom.[855] This idea has firmly taken hold within the discourse on human rights since the 1968 Proclamation of Tehran.[856] Examples of social and economic rights range from social security, fair working conditions, education, health care, and housing.

Declaring social and economic rights as human rights has not been without controversy. People living outside Western Europe—in nations with different economic structures and cultural traditions—know that these rights remain meaningless for most of the world's population. In fact, subjecting the wider society to individual rights—especially positive ones—conflicts with the cultural traditions

852 Ibid., Part I. Toward a Theory of Human Rights – 6. The State and International Human Rights, page 35.

853 Lauterpacht (1950), Part III- Section 1, 3. The Contents of the Bill of Rights, page 280-281.

854 Ibid., Part III- Section 1, 3. The Contents of the Bill of Rights, page 281.

855 Ibid., Part III- Section 1, 3. The Contents of the Bill of Rights, page 284.

856 Proclamation of Teheran, Final Act of the International Conference on Human Rights, Teheran, 22 April to 13 May 1968, U.N. Doc. A/CONF. 32/41 at 3 (1968), accessed on October 2025, http://hrlibrary.umn.edu/instree/l2ptichr.htm: *"13. Since human rights and fundamental freedoms are indivisible, the full realization of civil and political rights without the enjoyment of economic, social and cultural rights is impossible. The achievement of lasting progress in the implementation of human rights is dependent upon sound and effective national and international policies of economic and social development;"*

of most societies worldwide.[857] Therefore, this final category of rights represents a form of idealism. Combined with the second category, these rights codify an ideal of social organization existing only in a limited number of countries.

Human Rights Enforcement

Human rights have gained remarkable worldwide acceptance. As Donnelly observed, virtually all states consider internationally recognized human rights to be a firmly established part of international law and politics, and virtually all cultures, regions, and leading worldviews participate in an overlapping consensus on these internationally recognized human rights.[858] Despite the cultural, political, regional, and economic diversity of the contemporary world, there is near universal agreement on not only the existence but also the substance of internationally recognized human rights.[859] No other ideal has come even close to such widespread international endorsement by both governments and movements of political opposition across the globe.[860]

There are currently six core international human rights treaties: two covenants, plus the conventions on racial discrimination, women's rights, torture, and the rights of the child. Each had in early 2012, on average, 172 signatory parties—this 88 percent ratification rate is strikingly high in contemporary international law.[861] Additionally, various expert committees monitor human rights implementation. Beyond global agreements, regional variations exist. The foremost examples are likely Europe's Convention for the Protection of Human Rights and Fundamental Freedoms, which covers mostly civil and political rights, and the European Social Charter, which addresses economic and social rights in considerable detail.[862] Other examples of regional human rights instruments are the 1981 African Charter on Human and Peoples' Rights and the 2004 Arab Charter of Human Rights, which entered into force in 2008, establishing an Arab Human Rights Committee.[863]

With such general and widespread acceptance of human rights, why would anything need to be added? There are, however, a few issues with modern human rights—especially when looking from a 'decentralized' perspective.

857 Author: the chapter on natural law demonstrates that Chinese, Hindu, Islamic, and Orthodox traditions prioritize religious and societal harmony above individual positive rights.
858 Donnelly (2013), Part II. 6. The Relative Universality of Human Rights, page 94.
859 Ibid., Part II. 6. The Relative Universality of Human Rights, page 95.
860 Ibid., Part I, 4, 3. Moral Theory, Political Theory, and Human Rights, page 62.
861 Ibid., Part II. 6. The Relative Universality of Human Rights, page 95.
862 Ibid., Part IV, 11, Regional Human Rights Regimes, page 173.
863 Ibid., Part IV, 11, Regional Human Rights Regimes, page 178.

Human Rights Shortcomings

The first issue is that human rights represent a codification of ideology, not liberty. As extensively discussed in this book, Western legal tradition directly shaped the current human rights order. But the world has changed in the meantime. When the UDHR was written, Europe was still the center of the world, and a large part of the world existed as subjected colonies. With the ambition to order the world for all, it was logical to think the world should become more like Europe. But as the chapter on natural law demonstrated, other cultures value other forms of legal order. The notion that the entire world could or should mirror Western Europe is unrealistic. Other nations do not desire this model. Regardless, Western-based international institutions continue to intervene in global affairs to achieve this ideal, both within and beyond their borders, and human rights legislation provides them with the moral and legal tools to do so.

This Western universality creates a second problem: it devalues alternative ways of living. Other ways of organizing society are considered, at best, a work in progress. Societies have to be nudged and manipulated until they act in line with what is deemed universal. Nations choosing their own path risk involvement in their local political affairs, being hit with economic sanctions, seeing their legitimate governments overthrown, and even suffering military invasions.

The modern cosmopolitan human rights advocate is no longer hindered by fixed universal and unchanging values but dances like a leaf on the winds of social and scientific novelties. Western thought went from a careful and humble exploration of that which is universal and making it the foundation of society to inventing increasingly exotic ideas and declaring them universal afterwards. Today's advocates are quick to express a problem as a human rights issue. Indeed, human rights law continues to gain international attention and strives to keep up pace with rapid social changes. This is, of course, getting it backwards. Basic human rights should reflect human nature and provide a timeless legal foundation rather than serve as a political enforcement tool for contemporary social ideologies. Social reform advocates rarely consider that societies with ancient roots might not be eager to change their way of life to accommodate 'universal' standards and social norms nobody had heard of five years ago.

Philosophical Tension

From a philosophical perspective, modern human rights are all over the place. They occupy various categories in the Hohfeldian graph; they can be privileges, rights, powers, or immunities. They include both positive and negative rights and contain

rights in rest and in motion. Most of all, they include rights that depend on enforcing unequal duties at both individual and state levels.

Traditionally, natural rights contained no entitlements. Entitlements benefit the one at the expense of the other. To fulfill an entitlement, one must apply force. Nowadays, entire generations have been raised with no notion of where their entitlements end and the rights of others begin. It is perfectly fine to secure entitlements in civil laws of an existing state, based on the social contract and governed by democratic procedures, The social safety net comes to mind. Health care and education facilitated by the state serve as other examples. However, such positive rights are never universal and cannot be considered natural.[864] After all, they depend on a specific government enforcing an unequal division of rights and duties. Unfortunately, it is an illusion to think that the world can be made equal by making the laws unequal. On such a fundamental level, the only way humans can truly be equal is in having the *exact* same rights and duties—equality in law. Moreover, unequal rights and duties cannot exist on a decentralized network without a government to enforce them. Here, equality is enforced by code.

The idea of natural rights that go beyond the power of contemporary government has stood at the center of Western civilization since its inception. After Bentham's legal reforms, a new concept emerged: law as a policy tool for those in power. The modern human rights movement, consequently, mixes contradicting objectives: the protection of inalienable natural rights and the subjection to powerful entities seeking utopia. These centrifugal forces tear at the fabric of the nation-state, currently the only level where rights are enforced and adjudicated.

The solution now is the same as in Roman times: liberty. Liberty is not to anyone's detriment. When rights are properly understood as liberties, governance does not rely on the initiation of force but merely ensures protection from it.

Codification and Enforcement Gaps

Modern interpretations of human rights reveal a fundamental contradiction about the origin of these rights. The vehement opposition to natural law leads to the conclusion that government is the source of all law. If human rights originated from the UN and EU, they would cease to exist if these institutions disappeared—an absurd notion. Natural and human rights declarations and conventions are not the source of rights but an attempt to formalize the rules for an orderly human society.

864 Author: Defining that which is not free as free in law does not make it free, it just distorts reality. It creates two categories of people: those that make use of the right, and those that have to bear the cost of it. Instead of uniting, it divides—and thus can never be claimed to be equal or universal. Moreover, they require an authority to make that which is unequal, equal.

Institutions simply interpreted and codified pre-existing ideas (each with different nuances).

The first example to consider is the U.S. Bill of Rights. Despite its lasting influence on American and global society, the Bill of Rights primarily addresses US-specific concerns, containing clauses uniquely American. Moreover, they are a mix of both natural and civil rights, and as such, they are not a list of universal natural rights.[865] Moreover, the Founding Fathers left out certain liberties so elemental to human existence that they could not have imagined future regulators transgressing against them (such as technology-enforced restrictions of property and transactional rights). On the flip side, they are a clear example of direct acceptance of natural law in the Constitution and the hearts and minds of the American people. It continues to positively influence American society through the legal system and acts as a moral compass for its citizens. The fact that Americans have a unique document codifying liberty at the center of their society highlights the fact that most countries do not have one. At the same time, the obsession with individual rights and the controversies stemming from them gave America the reputation of being a country of out-of-control litigation. That American rights are now defined far beyond basic liberties is not helpful for this exercise either.

The second example is the Charter of Fundamental Rights of the European Union (CFR). This is a positivist document that tries to meticulously codify rights as granted by the EU. There are no clear immutable rights, and the document is subject to ongoing specification, addition, and amendment. The CFR lays out what is and is not liberty, maintains periodical updates, and contains a long list of exemptions on basic rights.[866] This results in a complex document that is not easily understood by the average person. The CFR stands for the modern European interpretation of human rights and includes many positive rights. As such, the CFR's concept of rights is not natural, universal, or readily applicable in other parts of the world. Moreover, the European Centre for Law and Justice (ECLJ) discovered that multiple judges on the European Court of Human Rights (ECHR)—the highest court adjudicating European human rights issues—have connections to George Soros's Open Society Foundations, which also funds most of the NGOs bringing cases before the court.[867] Unsurprisingly, the EU human rights institutions have not been

865 "*U.S. Constitution,*" (Cornell Law School), accessed on Aug 8, 2024, https://www.law.cornell.edu/constitution, [Author: take for example the 2nd amendment, right to bear arms; 6th amendment, jury trial; 12th amendment, election of the president].

866 "*Document 12012P/TXT, Charter of Fundamental Rights of the European Union 2012/C 326/02,*" (European Union, October 26, 2012), accessed on Aug 8, 2024, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT

867 "*ECLJ, NGOs and the Judges of the ECHR 2009 – 2019,*" (European Center for Law and justice, February 2020), https://eclj.org/ngos-and-the-judges-of-the-echr?lng=en,

able to protect EU citizens from invasive international policies and seems unable to balance the interests of various parties—for example, the rights of citizens versus illegal aliens.

Finally, we have the UDHR and various other international law instruments. It is written as a top-down document that establishes the UN as the guarantor of human rights, protecting individuals from nation-states. While it is significant that these rights achieved global recognition and acceptance, they include a weak spot: the UN itself, along with its specialized agencies and policies, cannot be 'impaired' by the human rights in their covenants.[868] As written in the UDHR, "these rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations."[869] According to its own treaties, individual rights are secondary to UN policies. Given that the UN and its specialized organizations aim to increasingly get involved in policymaking, this is problematic. This way, human rights are only guaranteed by IOs until it matters. The water gets even muddier when the UN declares its policies themselves as obligations derived from human rights and therefore duties on all states.[870] Natural rights were meant to protect individual autonomy from state interference; instead, they now justify global policies that erode both individual and state sovereignty.

It was Lauterpacht who argued that nation-states were "the insurmountable barrier between man and the law of mankind."[871] According to him, democracy is not an absolute safeguard of freedom. This safeguard must lie outside and above the

page 2: "*This report shows that at least 22 of the 100 permanent judges who have served on the European Court of Human Rights (ECHR) between 2009 and 2019 are former officials or collaborators of seven NGOs that are highly active before the Court.*" "*The Open Society network [Author: George Soros] is distinguished by the number of judges linked to it and by the fact that it funds the other six organisations mentioned in this report.*"

868 "*International Covenant on Civil and Political Rights,*" (1966), Art. 46: "*Nothing in the present Covenant shall be interpreted as impairing the provisions of the Charter of the United Nations and of the constitutions of the specialized agencies which define the respective responsibilities of the various organs of the United Nations and of the specialized agencies in regard to the matters dealt with in the present Covenant.*"

869 "*Universal Declaration of Human Rights,*" (United Nations, 217 (III) A, Paris, 1948), http://www.un.org/en/universal-declaration-human-rights/, Art 29 (3).

870 UN, "*Frequently Asked Question on Human Rights and Climate Change, Fact Sheet No. 38,*" (United Nations, Human Rights, Office of the High Commissioner, New York and Geneva 2021), page 30: "*States, as primary duty bearers, have a positive obligation to mitigate climate change and ensure that all persons have the necessary capacity to adapt to its consequences. The responsibility of States to respect, protect and fulfil all human rights for all, in accordance with Articles 55 and 56 of the Charter of the United Nations, also applies to populations outside their territories.*"

871 Lauterpacht (1950), page 77.

state.[872] The law of nature must supply, as it has done in the past, much of the spiritual basis and much of the political inspiration of that elevation of the rights of man to a legal plane superior to the will of sovereign states.[873] He went as far as arguing that international society must secure inalienable human freedoms as an indispensable condition of the peace of the world.[874] In his vision, an international legal order would be installed by democratic states to ensure that natural law is enforced.

Ironically, the resulting supranational forces have themselves become threats to both rights and sound government. This is a turning point in history. Governments across the world have subjected themselves to international institutions and begun neglecting basic human rights in response to various crises—real or imagined. At the same time, threats to individual rights have become increasingly profound and defused. Individual liberty no longer comes under pressure from states alone—the debt-based financial system, international NGOs, intergovernmental organizations, big business, scientific fundamentalism, and cross-border technology all play a part. As threats to liberty evolve, so must the tools that protect it. The dignity of the individual requires protection not just from other individuals but, more pressingly, from states and their supranational derivatives. Therefore, a bill of rights is needed that exists independently of the institutions threatening liberty. A bill that goes beyond any single state is not the codification of ideology, does not treat individuals as a means to an end, and exists separately from supranational governing layers. Blockchain technology has proved that this can be done for a financial system. Can it be done with law as well?

§ 16.3. A Renewed Call for Liberty

> *"Liberty consists not only in the right granted, but in the power given to man to exercise, to develop his faculties under the empire of justice, and under the protection of the law."*
>
> ~Frédéric Bastiat

What we need is a foundational legal framework independent of bureaucracies and political whims and wishes. One that lives in the hearts and minds of people around the world, just as the Bill of Rights lives in the hearts and minds of Americans. A

872 Ibid., page 123.
873 Ibid., page 126.
874 Ibid., page 78.

framework of liberties embraced by all as owed to them by society and accepted as duty owed to others.

Each historical document of liberty addressed the needs of its specific time and place. The English Magna Carta allowed the English barons to extract authority from the king. The U.S. Bill of Rights similarly focused on the rights of American citizens. The UDHR established the UN and other global institutions as powerful central arbitrators to help prevent the horrors of war, thus focusing mainly on limiting the absolute rights of modern nation-states. Now the future demands a phase of global integration free from both all-powerful states and the unaccountable institutions that supplant them. Decentralized technology allows us to envision this legal system and build it from the bottom up. Why not start with a foundational legal document enacted on the blockchain that establishes minimum liberties for individuals across all decentralized networks?

Law emerges when individuals form collectives to protect both individual and shared interests. Liberties establish the scope of actions within the collective legal framework. Without this ability for individuals to act, there would be no legal system. Just as blockchain base layers ensure equal access in financial systems despite diverging interests, the codification of basic liberties ensures equal protection in society. The merger of the ideas of liberty with liberty-enhancing technologies appears intuitively logical. There are, however, limitations.

Hard-Coded Limitations

Decentralized technologies differ from traditional administrative systems. They are accessed and used individually and voluntarily. With cryptocurrencies, only the owner of the key has access to the funds. Any right requiring one group to pay for the other, however noble the agenda, cannot be enforced. The crypto industry gravitates toward full property and transactional rights. There is no collectivism in decentralized networks, unless by consent. There is no rearranging or transferring of rights and duties. It is a fascinating blueprint of humanity where people act in their self-interest while being integrated under a set of rules into mutually beneficial cooperation. The DBoL must align with this reality. Any other approach cannot work.

In a decentralized system with equal access, people are either equal or not. This binary outcome feels intuitively just but is surprisingly absent from the modern discourse on rights, which divides the entire world into regulators and regulated, grantors and beneficiaries, and various arbitrary groups with conflicting demands upon each other. Now we can finally aim for a legal foundation that is equal at its base layer. A system where all human beings are free in right, with corresponding duties to protect the same rights in others—not idealistic but realistic equality.

The other technological outcome of a blockchain-based legal system is the inability of any central authority to set rules or interfere with the system. It is, by design, an equal system where key holders express their free will without intermediaries. Everyone can freely participate and be responsible for the consequences. Nobody answers to others or holds rights that depend on others. There can be no limitation of rights by third parties for ulterior objectives or personal gain. This is the most equal legal foundation ever created—the equality is hard-coded and not subjected to institutional ambitions, political processes, or contemporary fancies.

The Case for a Decentralized Bill of Liberties

Technology is uniting humanity in novel ways. Bitcoin demonstrated that neither financial intermediaries are needed to facilitate electronic transactions nor central banks to provide a monetary system. While blockchains primarily record transactions, they can store text as well. Decentralized networks could create and publish law. Replacing central authority with consent offers a revolutionary perspective on law-making.

Open-source technology, particularly cryptocurrency networks like Bitcoin, introduces a powerful new approach to preserving liberty. These systems operate through code rather than law, avoiding centralized control and ownership structures that could be subject to regulatory capture. This technological framework embodies natural rights principles, where duties reciprocally derive from the recognition of others' rights rather than from external regulation.

But without an enforcing authority, how can a bill of rights published on a blockchain serve to protect individual liberty? According to Hayek, formulations of individual rights "impress upon the public mind" the value of liberty and make it "part of a political creed which the people will defend even when they do not fully understand its significance."[875] So the DBoL can serve as a compass and provide a foundation on which to build further decentralized legal systems. It provides participants in this industry (and beyond) with a tool to assess behavior, regulations, and technologies. The DBoL thus establishes a moral framework from which a code of conduct can be derived. Users can ask themselves, "Do my actions or technology violate someone's rights?" If they do, then one indirectly chips away at one's own liberty. Regardless of short-term benefits, one pays the price by living in a more corrupt society. Moreover, once people align with these principles, they gain an objective tool to evaluate the behavior of all institutions—from state authorities and corporations to DAOs, NGOs, (central) banks, multinational organizations, and especially IOs.

875 Hayek (1960), page 217.

Moreover, these standards can be read by both humans and machines, making them a possible input for AI and smart contracts.

The DBoL can inspire citizens of countries without a bill of rights by providing a blueprint for bottom-up implementation—an alternative to the unrealized promise of international instruments. The DBoL can function like a 'prenuptial agreement' to the social contract, establishing clear boundaries between what is transferred to collective rule and what remains under individual control. This arrangement divides governance into two distinct spheres: immutable foundational principles that protect individual rights and liberty and flexible operational systems that allow for the natural evolution of the law.

It is a well-established fact that states include both international and private standards in their national legislation, so why wouldn't they include decentralized ones? Moreover, the DBoL could provide an anchor during times of political turmoil caused by shifts in monetary systems[876] or ineffective, authoritarian, or insolvent governments. The lack of geographical boundaries works favorably: decentralized networks expand this jurisdiction across humanity. Many of these networks are now working on universal money, so why not do the same with universal law?

When establishing a social smart contract[877]—whether a DAO, network state, or other Decentralized Law instrument—entities can 'call' upon the DBoL during the creation process. The DBoL and other legal standards could become an integrated part of SCBs or Decentralized Legal Systems (as explained later in the book). When uploaded as a smart contract on the blockchain, the DBoL can serve both blockchain projects and AI as an objective legal standard. Similar to how smart contract software 'calls' libraries of code, smart legal contracts can call law libraries of legal principles. Accepting these and other standards could become a prerequisite for doing business in a given industry.

The DBoL could help replace immature desires for freedom in cyberspace with mature liberty in law. It could help redirect attention away from democracy and voting systems that have dominated discussions in the crypto space. Democracy

876 Author: for example during transitions from a debt- to an asset based monetary system.

877 Author: the term Social Smart Contract has been used before, for example by: Democracy Earth, "*The Social Smart Contract, An open source white paper,*" (Democracy Earth, Version 0.1: September 1st, 2017), accessed on October 25, 2024, https://democracy.earth/. Unfortunately, the paper does not define what a social smart contract is. In fact, both the terms 'smart contract,' or 'smart social contract' are not mentioned in the paper. This is not uncommon. A social contract is an 'agreement among equal individuals to establish rights and duties under a form of government.' A social smart contract can then be 'a smart contract establishing rights and duties among equal individuals under a form of government by using blockchain technology.'

is the ruling form best able to express the collective will while posing the smallest threat to liberty. Democracy cannot be an end in itself, since it is merely a system for streamlining the essence of what truly matters: the rights and duties associated with living in a particular society. The core necessity of a just society is not democracy but liberty.

How should decentralized liberties ideally be interpreted? The ideal example comes from international tax law. Due to the complexities of international taxation, individuals investing abroad may face tax liability in two countries on the same income. To prevent this, countries establish tax treaties that limit taxation to one country. As a result, taxpayers pay taxes only once. Tax treaties protect the rights of individuals and limit the taxing rights of states. They do not grant rights to tax authorities, and they cannot limit the rights of taxpayers. Taxpayers are free to apply this tool to ensure their rights. The DBoL and other human rights documents function similarly: they limit the authority of states and IOs over the individual. In turn, they cannot be used to claim rights over individuals or to use protective duties as an excuse to curb other rights. This establishes the DBoL as a tool to facilitate free will while preventing individuals from becoming a means to an end.

The primary characteristic of decentralized networks is the absence of a central authority. What is accepted by the members becomes 'law' for all to follow. In line with this reality, the DBoL's influence depends solely on its acceptance by the people—it stands or falls on its own. The people can follow the DBoL voluntarily. They can include it in their dispute settlement and enforcement systems. They can call on the DBoL to demand justice and make it a central theme of their (civil) governance systems or use it to assess the legitimacy of civil or international law.

Bitcoin started with a piece of code on the computer of an anonymous software developer. Only afterward did it enter the imagination of the people. Every law began as an idea written on paper. When Martin Luther nailed his Ninety-five Theses to the church door in Wittenberg in 1517, he sparked the breakup of the Catholic church—then the world's most powerful organization with supreme authority over Europe.[878] So far, blockchain technology has been the most promising social revolution of the twenty-first century. Posting a Decentralized Bill of Liberties on the blockchain is a logical next step. There it will live forever: immutable, decentralized, and available for everyone to apply to their lives as they see fit.

878 "*Ninety-five Theses – work by Luther,*" (Encyclopedia Britannica), accessed May 7, 2024, https://www.britannica.com/event/Ninety-five-Theses

> *"The authority of the Constitution derived not from its authors, but from the people who ratified it: As the instrument came from them, it was nothing more than the draft of a plan, nothing but a dead letter, until life and validity were breathed into it, by the voice of the people..."*
>
> ~James Madison (Founding Father of the U.S. Constitution)

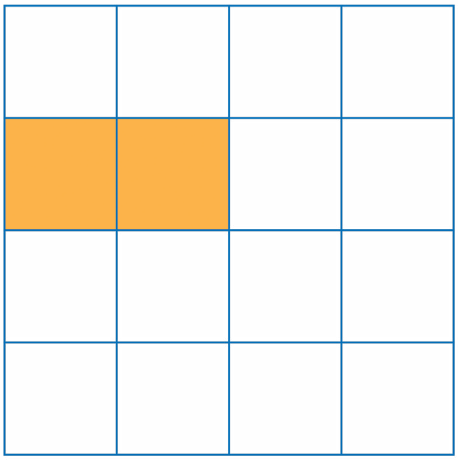
Methodology

> *"Liberty is the only thing you cannot have unless you are willing to give it to others."*
>
> ~William Allen White

The next order of business is coming up with a list of liberties. The major distinction we must make is between positive rights depending on third parties and negative rights protecting against third parties. If we wish to get to the core of natural rights, we cannot include positive rights. First, positive rights require positive enactment: they must be established by a state, by civil law, or by consent. Positive laws are secondary, not primary, rights. Moreover, there cannot be natural rights that divide groups into categories such as providers and beneficiaries: natural rights apply equally. If we are free and equal by nature, we must believe in negative rights. Any positive rights would have to be provided by a legitimate government or grounded in consensual arrangements, such as the Consensus Jurisdiction elaborated on in a future chapter.

Taking all this into account, a bill of rights for blockchain systems requires several key characteristics. First, it can only consist of primary rights that divide equal interests, with respect for these rights being a duty for all. Second, the absence of coercion mandates selecting negative rights that facilitate the expression of free will. Third, it must restrict itself to rights of a universal character and in rem (against all). Fourth, these rights must remain non-transferable (in rest). Finally, given these requirements, it must avoid the broad term rights, instead focusing specifically on what the Hohfeldian system defines as privileges—better understood as liberties.

Graph of Liberty



To provide a more practical and visual understanding, I conceptualized the Graph of Liberty. In this case, it represents a society of sixteen people. Inside this framework, each individual has the same rights and duties. Within their square, individuals have full autonomy to act—it represents their liberty.

Expressing liberties in a graph reveals a few central concepts. First, liberties are bordered with and restricted by the rights and duties of others. Moreover, liberties are equal, or they are not liberties.

Next, when liberty is the same for everybody, no group of people—including, and perhaps especially, a democratic majority—can make amendments to this frame in their own favor.

And finally, when rights and duties are divided equally among all people, the same principles apply to any two individuals. This insight allows us to assess which of the myriad rights is a true liberty.

Drafting a List of Liberties

Each liberty has to be written in a way that the relation between individuals is a mutual duty of respect. The goal is to develop a modern, universal, and practical interpretation of natural rights, not to solve all possible riddles and complications of human life. Individuals, legislators, and courts interpret specific circumstances according to local customs.

Natural liberties exist prior to any legal arrangements, and therefore, their level of detail is minimal. Thomas Aquinas already observed that the more general a precept of natural law is, the more likely it is to be known by a greater number of people. The more particular a precept of the natural law is, the more likely it is that a particular individual will get it wrong. The greater the detail, the more likely it will be that people disagree about what the natural law requires.[879]

A simple set of liberties serves another purpose: unsophisticated audiences must be able to understand them for it to have value. Liberties are limited general principles

879 "*St. Thomas Aquinas on the Natural Law,*" (Aquinas Online), accessed on May 7, 2024, https://aquinasonline.com/natural-law/

that apply to all human beings. Therefore, the bill must be easily translatable into different languages.

How can we achieve this? Luckily, the foundation of fundamental rights is well established. Governments worldwide have enacted numerous bills of rights. How though, can we extract a set of liberties that can reasonably be considered universal? We must not forget the criticism of the legal positivists: law cannot be a set of arbitrary subjective preferences embellished with a claim to a higher power. One solution is to examine empirically the currently most widely accepted form of human rights: international law. As discussed, various treaties have garnered worldwide acceptance. Accomplished legal minds drafted these treaties. Governments and individuals across various times, ideologies, and cultures have almost universally accepted these guiding principles. Basing our list on these well-established principles eliminates both the need to reinvent the wheel and the risk of creating an arbitrary wish list of rights influenced by subjective beliefs and interpretations. Donnelly provided an excellent overview of internationally recognized human rights. His work summarizes those principles that are found in the UDHR and codified in international treaties.[880] This overview forms a base list of almost universally accepted human rights and can be comfortably relied upon.

Next, the DBoL required a selection of rights from this list that qualified as equal liberties. This was made possible by comparing them to the requirements established previously. The Graph of Liberty aided this analysis. First, envisioning a society of two people revealed if rights stood on their own or depended on third parties. This exercise helped select those negative rights that are equal and at rest. Next, extrapolating the rights to a society encompassing all people in the human family determined if the rights retained their meaning—a right to free health care sounds appealing but simply does not exist in most of the world. This helped me select the rights that are both universal and in rem. Finally, removing rights whose creation depends on civil laws or international institutions completed the analysis. After all, at the fundamental natural law layer, no institutions exist to provide benefits—nor do they in decentralized networks. Moreover, ideals and public goals cannot play a role in the most foundational division of rights and duties of equals since they appear only after humans have organized themselves.

Outcomes and Additions

The original overview listed thirty-seven human rights that governments worldwide have agreed upon. Applying the methodology reduced the list to twenty-eight

880 Donnelly (2013), page 27: TABLE 2.1 INTERNATIONALLY RECOGNIZED HUMAN RIGHTS, [Author: I verified this list against the legal instruments mentioned].

liberties. These I divided into ten categories of liberties and a list of prerequisites for a just legal system. The resulting bill consists of universally accepted rights already ratified by most states in the world. It satisfies both the concepts of natural and positive law because the list is defensible both philosophically and empirically. Furthermore, it extracts natural rights that are independent of religious doctrine and subjective morality, drawing instead upon timeless principles generally accepted as fair and just.

Still, to make the list suitable for the twenty-first century, cosmetic adjustments were needed. Rather than inventing categories of liberties, small additions were made to existing ones. In the article on life and liberty (Art. 1), the concept of bodily integrity and a safeguard against medical and scientific experimentation were included. This idea springs from the widely recognized Nuremberg Code, the world's response to the horrible treatment of prisoners during the Holocaust. It established the principle that no person should be subjected to medical and scientific experiments without consent.[881] The International Covenant on Civil and Political Rights codified this principle as follows: "no one shall be subjected without his free consent to medical or scientific experimentation."[882]

The second addition addresses the article on slavery and servitude and pertains to the continuous revelations about sexual misconduct perpetrated by people of influence.[883] Although every civilized nation's criminal code prohibits sexual violence and exploitation, for some reason, human rights treaties have not specifically included these offenses. The Convention on the Elimination of All Forms of Discrimination against Women, article 6, prohibits the sexual exploitation of women.[884] However, sexual exploitation victimizes not only women, and sexual violence takes many forms. Art. 9 addresses this since these behaviors represent a grave violation of liberty (especially when conducted in an organized form).

Technology has introduced threats to liberty that those in the analog age could not have foreseen. Art. 3 adds privacy as a broad right since the need for privacy extends beyond correspondence—to areas such as data protection, for example.

881 "*Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10,*" (U.S. Government Printing Office, 1949, Vol. 2, pp. 181-182. Washington, D.C.): "*The voluntary consent of the human subject is absolutely essential.*"

882 "*International Covenant on Civil and Political Rights,*" (1966), Article 7: "*No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment. In particular, no one shall be subjected without his free consent to medical or scientific experimentation.*"

883 Author: in recent years many prominent entertainers and political figures have been discredited by accusations of sexual misconduct, both in the United States and in Europe.

884 "*Convention on the Elimination of All Forms of Discrimination against Women,*" (United Nations General Assembly, Adopted 18 December 1979), Article 6: "*States Parties shall take all appropriate measures, including legislation, to suppress all forms of traffic in women and exploitation of prostitution of women.*"

Art. 5 followed the International Covenant on Civil and Political Rights to ensure free speech applies regardless of medium.[885] From the same instrument, the right of free exchange of goods and services was extracted.[886] Both property rights in general and transactional rights in particular form the foundation of a free and just society. Both have come under stress through (forced) intermediation and externally imposed policy objectives. Art. 6 addresses this situation.

Finally, Art. 2, given technology's vital role in modern society, expands on the right to participate in scientific advances to include technological ones as well. In addition, Art. 7, concerning the right to free assembly, was phrased broadly to cover all forms of (technological) association. Moreover, to emphasize the immediate application of these liberties rather than their contingency on hypothetical future enforcement, the DBoL replaces the 'shall be' terminology used in the conventions with more precise modal verbs. The resulting bill paves the way toward a digital age with a perfectly reasonable set of liberties that maintain the essence of human rights enacted globally.

Decentralized Enactment

The DBoL was published on February 27, 2025, on the Ethereum blockchain.[887] Explanations of its use are found on GitHub.[888] A PDF version of the DBoL was published on the InterPlanetary File System under its author's name and an open-source license.[889] This was done because of lessons learned from the Bitcoin protocol; its author's anonymity enabled nefarious actors to claim they were the inventors. Australian Craig Wright was notoriously successful in this regard (for a while). His copyright claims resulted in a stream of lawsuits against anyone involved in the open-source development of the technology and caused significant damage to the community. Many years and numerous court cases passed before it was

885 "*International Covenant on Civil and Political Rights,*" (1966), Article 19: "*1. Everyone shall have the right to hold opinions without interference. 2. Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.*"

886 "*International Covenant on Civil and Political Rights,*" (1966), Article 1: "*2. All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.*"

887 "*Contract 0xdD7150425FE924f1e5D4d650AEBaA6365b1CB7dA,*" (Etherscan, Feb-27-2025 07:05:23 AM UTC), https://etherscan.io/address/0xdD7150425FE924f1e5D4d650AEBaA6365b1CB7dA#code

888 "*Decentralized Bill of Liberties,*" (Github, March 7, 2025), accessed on March 12, 2025, https://github.com/decentralized-law/bill-of-liberties

889 "*Decentralized Bill of Liberties,*" (IPFS, February 27, 2025), accessed on March 12, 2025, https://ipfs.io/ipfs/bafkreictr35gzfbpfvgjisui3k3pm2nms4h3mx2hlyezxfjc2kca2f34du

established that he was not Satoshi Nakamoto.[890] Sadly, these kinds of disputes over authorship are not isolated events: even the earlier cited Nuremberg Code became the subject of such controversy once widely adopted.[891]

In addition, and as the chapter on tokenization explained, any published work is subject to copyright law. The author owns the copyright to this work by law, regardless of opinion. Only by claiming full ownership of this work now and appropriately licensing it with an open-source license can it be ensured that people can use it without restrictions now and in the future.

> *"Victory has a thousand fathers, but defeat is an orphan."*
> ~John F. Kennedy

§ 16.4. Summary and Interpretation

Key Takeaways:

- Liberty, not democracy, is the core necessity of a just society.
- Natural rights originate as inherent properties, with each person born sovereign and free.
- Rights correspond with duties—one can claim rights only if prepared to accept the duty to protect equal rights in others.
- Modern legal scholars (Salmond, Holland, Hohfeld) developed frameworks classifying different types of rights, including distinctions between rights, privileges (liberties), powers, and immunities.

890 CRYPTO OPEN PATENT ALLIANCE vs. CRAIG STEVEN WRIGHT, [2024] EWHC 1198 (Ch), The High Court of justice, Business and Property Courts of England and Wales, Intellectual Property List (ChD), 20th May 2024, page 227 (926): "*Overall, in my judgment, (and whether that distinction is maintained or not), Dr Wright's attempts to prove he was/is Satoshi Nakamoto represent a most serious abuse of this Court's process. The same point applies to other jurisdictions as well: Norway in particular. Although whether Dr Wright was Satoshi was not actually in issue in Kleiman, that litigation would not have occurred but for his claim to be Satoshi. In all three jurisdictions, it is clear that Dr Wright engaged in the deliberate production of false documents to support false claims and use the Courts as a vehicle for fraud. Despite acknowledging in this Trial that a few documents were inauthentic (generally blamed on others), he steadfastly refused to acknowledge any of the forged documents. Instead, he lied repeatedly and extensively in his attempts to deflect the allegations of forgery.*"

891 Shuster, Evelyne, "*Fifty Years Later: The Significance of the Nuremberg Code,*" (Engl J Med 1997;337:1436-1440, VOL. 337 NO. 20, November 13, 1997).

- Human rights emerged after WWII, culminating in the Universal Declaration of Human Rights.
- Human rights are divided into three categories: personal rights, political rights, and social/economic rights. Core treaties have an average 88 percent ratification rate among nations.
- Modern human rights frameworks have shortcomings: Western ideological bias, the risk of international institutions overriding individual rights, and the conflation of negative rights (protecting from interference) with idealistic positive rights (requiring provisions from others).
- Decentralized technologies can only support negative rights (protecting from interference) and cannot enforce positive rights (requiring provisions from others)
- The Decentralized Bill of Liberties (DBoL) focuses exclusively on primary, equal, negative rights that are universal, non-transferable, and applicable against all, emphasizing liberties rather than entitlements while remaining technology-neutral.
- The DBoL's development involved analyzing existing human rights documents and using the Graph of Liberty to extract truly universal equal liberties.
- To address modern threats to liberty, the DBoL includes additions on bodily integrity, sexual violence, privacy, free speech regardless of medium, property and transactional rights, participation in technological advances, and the right to voluntary association.
- The final DBoL includes ten categories of liberties and prerequisites for a just legal system.
- The DBoL can serve as a foundation for DAOs and Decentralized Legal Systems, an inspiration for countries lacking bills of rights, an anchor during political turmoil and changes of monetary systems, a standard for smart contracts and AI systems, a moral framework for evaluating behavior and technology, and a central source of individual liberty in an increasingly complex world.
- The DBoL's influence will depend on the acceptance of the people, like how Bitcoin gained adoption through voluntary participation—introducing a new era of law-making.

Decentralized Bill of Liberties

PREAMBLE:

Whereas all human beings are born free and equal in dignity and rights and are endowed with reason and conscience, they should act toward one another in a spirit of brotherhood,

Considering that the equal and inalienable rights of all members of the human family is the foundation of freedom, justice, and peace in the world,

Recognizing that modern technology unites humanity across borders,

Observing that cross-border technology and governance both pose opportunities and challenges to individual freedoms to act,

Acknowledging that liberties, as fundamental rights, protect individual freedoms to act,

Affirming that liberties limit all forms of human governance and create a universal duty of respect for all persons and institutions—*without granting authority to create obligations beyond their original scope,*

Realizing the need for a bill of liberties that transcends jurisdictional limitations while applying equally to all,

CREATING AN IMMUTABLE RECORD OF THE FOLLOWING UNIVERSAL LIBERTIES:

Article 1

Every human being has the right to life, liberty, and the security of person, to bodily integrity, and to freedom from medical and scientific procedures without consent.

Article 2

Every human being has the right to freedom of thought, conscience, and religion and to participate in cultural life, arts, and technological and scientific advancement.

Article 3

All human beings must be secure in their family, home, and correspondence; be free from attacks upon their honor and reputation; and have the right to privacy.

Article 4

All human beings are free to enjoy their own culture, to profess and practice their own religion, and to use their preferred language. All men and women are free and protected in founding and raising a family.

Article 5

Every human being has the right to freedom of opinion and expression and to freely obtain and share information regardless of medium.

Article 6

Every human being has the right to work and engage in economic activity; to acquire, own, use, and exchange property; and to transact freely in a medium of exchange of choice.

Article 7

Every human being has the right to assembly and association and to organize with others to pursue and protect their mutual interests.

Article 8

Every human being has the right to freedom of movement and residence.

Article 9

Every human being has the right to self-determination, to dignity, to pursue education, and to the free development of personality.

Article 10

No human being may be subjected to slavery or servitude, to torture, to cruel, inhuman, or degrading treatment or punishment, or to sexual violence or exploitation.

REQUIREMENTS OF ALL LEGAL SYSTEMS:

All human beings have a right to a legal order where they are treated as equals before the law, enjoy equal protection from rights violations and arbitrary arrest or detention, and have an effective remedy against rights violations.

No one may be deprived of any liberty except on such grounds and in accordance with such procedures as established by law, and no one may be held guilty of any penal offense which did not constitute a penal offense at the time when it was committed.

Everyone charged with a penal offense has the right to be presumed innocent until proven guilty; be entitled to a fair and public hearing by a competent, independent, and impartial judiciary system; and, when deprived of their liberty, be treated with respect for the inherent dignity of the human person.

XVII

Declaration of State Rights and Duties

> *"The moment we recede from Right, we can depend upon nothing."*
> ~Hugo Grotius

There is no denying that ongoing globalization and technological innovation integrate humanity. However, challenges emerge around legitimate governance. Two major forces are at work at the international level. First, in certain areas, the world is moving toward intense cooperation under the banners of the G20, the UN, and hundreds of other international regulatory organizations. At the same time, a substantial number of nations, organized under the BRICS banner, are moving away from Western-dominated institutions in favor of multilateralism and more balanced global governance systems.[892] The world finds itself in the curious position where certain regulations—including financial ones—integrate, while political power fragments. This results in decreased international cooperation except on topics where consensus exists. Unfortunately, the desire to force the use of blockchain technology into regulated intermediaries appears to be universal. International regulators, as well as many governments, oppose unrestricted peer-to-peer finance. The crypto industry must acknowledge the regulatory hostility existing at this level of law creation—a hostility that individual states, let alone the individual, might find difficult to contest. The time is now to reestablish what is the appropriate role for international regulators. What better way to do this than with a blockchain-published declaration establishing clear boundaries between international and national affairs aiming to protect state sovereignty and collective free will from international powers?

As the German political philosopher Carl Schmitt observed, the international legal order must outline the conditions under which sovereign political communities

892 *"President Xi Jinping Chairs and Delivers Important Remarks at the High-level Dialogue on Global Development,"* (BRICS 2022, June 25, 2022), accessed on Oct 29, 2024, http://brics2022.mfa.gov.cn/eng/dtxw/202206/t20220625_10709986.html

with differing political identities can coexist. A legitimate international order must be able to accommodate a plurality of political communities with different, self-determined political identities.[893] Moreover, it must recognize that despite massive global regulatory cooperation and international rights declarations, force remains a tool used by political communities to express their will in the international sphere. Any conception of international order violating these two conditions becomes incompatible with political reality and thus illegitimate.[894] The existing international legal order, having become complacent under unipolarity, must adapt to this reality.

This highlights our predicament: we cannot accept returning to a world where force and violence govern all interaction between states. At the same time, we cannot allow an unchecked system that subjects individual liberty to its policies. Administering a multi-polar world must follow civil law's central principle: justice emerges through equal rights and duties while preserving individual liberty. The imposition of one leading ideology as universal can only lead to discontent and chaos. Just as individuals resent unfair systems that do not respect their autonomy, individual states resent being subject to an unjust and unequal international order.

Accepting liberty for the individual requires the acceptance of behaviors and worldviews different from one's own. The same applies to the international sphere. What is needed is liberty within the international realm, where individual states possess the freedom to organize themselves within the international legal structure and are treated as equals. Individual liberty is formalized in law by a bill of rights. Perhaps state liberty can be so formalized as well.

§ 17.1. Failures of International Law

One of the main problems identified in the first section of this book is the substitution of working democracies with an international system without checks and balances. The use of treaties to achieve policy aims has become widespread and invasive in our everyday lives. Activists have replaced diplomats in the halls of international power. International law's influence is significant yet remains misunderstood and underestimated.

The common argument for global governance is that certain challenges are too large for individual nations to tackle alone. This question is not easily answered. Certain

893 "*Carl Schmitt,*" (Stanford Encyclopedia of Philosophy, Aug 7, 2010, revised Aug 28, 2019), accessed on May 7, 2024, https://plato.stanford.edu/entries/schmitt/, 5. Liberal Cosmopolitanism and the Foundations of International Order [Author: edited for readability].

894 Ibid., 5. Liberal Cosmopolitanism and the Foundations of International Order [Author: edited for readability].

issues concern all of humanity, not just single states. Cross-border cooperation was necessary in the past and will remain so in the future. However, the blind pursuit of global solutions itself is ushering in a crisis in governance.

Before our eyes has emerged a legal framework that slowly erodes all national sovereignty and, by extension, individual liberty. No formal structures exist at this level of law-making that allow public participation in creating, amending, or legally challenging these regulations. It is turning the world into one of legislation without representation.

The current legal order faces issues of legitimacy. Individuals founded the state and validated it through the social contract, or, more practically, the democratic vote. The state then created international law. By turning this order around, it loses its validity. Trying to transfer the legitimacy away from the people to foreign powers with no appropriate checks and balances betrays the foundations of the state. A legal system created based on equals through a social contract cannot be replaced by a system where a small group of foreign interests gets to determine the greatest utility for all. This process truly strikes at the heart of self-determination and what it means to be a community of human beings with collective free will. As awareness of this problem grows, increasing numbers of citizens—and eventually entire nations—will reject it. These global frameworks are both powerful and brittle. When countries decide to reclaim their sovereignty by walking away, they evaporate. This situation is undesirable for both proponents and opponents of global governance because both actual *and* perceived legal overreach—along with the resulting revolts from unhappy subjects—result in legal uncertainty.

To improve the legitimacy of the international governance layer, two paths emerge: subject this system to regular checks and balances or place it under limitations as to what it can and cannot govern. With the first option, we immediately run into a range of problems. Typical checks and balances would be to have either democratic oversight or competent courts to hear disputes. However, uniting all humanity under a single jurisdiction would be practically and politically unfeasible. As American legal scholar John Rawls (1921–2002) observed, a world government—meaning a unified political regime with the legal powers normally exercised by central governments—would either be a global despotism or else would rule over a fragile empire torn by frequent civil strife as various regions and peoples try to gain their political freedom and autonomy.[895]

Rawls proposed a social contract among states to regulate their behavior toward one another. However, he believed that only liberal countries and others he called

895 Rawls, John, "*The Law of Peoples, with the 'The Idea of Public Reason Revisited,'*" (Harvard University Press, 1999), page 36.

"decent" could be part of this international order.[896] This mentality conflicts with accepting other ways of life—a fundamental requirement of liberty. Regardless, the idea of applying a social contract to international relations intrigues. As discussed in Chapter 3, a social contract preserves individual rights against the state, thereby assuring individual liberty. The same can be done by individual nation-states regarding international and foreign powers. Can individual nation-states establish similar protections against international and foreign powers? Such an easy solution leaves nation-state structures intact while adding limits on what international law can and cannot regulate.

This solution aligns with basic legal principles: it is a well-established and globally accepted concept that certain inherently personal areas remain free from government interference. Similar liberties should apply to nation-states and perhaps even other forms of human cooperation, such as decentralized networks. This idea aligns with subsidiarity, the concept that governance should operate at the appropriate level of authority. The goal of subsidiarity is not to attack the legitimacy of governments or international institutions but to assign what is appropriate to regulate at each level. The first and obvious limitation: international law should concern itself first with the rights and duties of states, not aim to be an illegitimate executive. Next, states should remain free to focus on their core responsibilities—the distribution of equal rights and duties of citizens. Once this liberty is in place, individuals (and states) can organize themselves voluntarily in cooperative communities.

§ 17.2. The Myth of Collective Rights

Just as individuals establish equality under a rule of law through a social contract, collectives of individuals require such structure as well to relate to each other as equals. What applies to national applies as well to global governance—subjects need liberty. Without it, sooner or later, they revolt. The state is limited by individual rights. To protect the free will of a people, IOs and powerful states should be limited by state rights.

Where can we look for a balanced international legal framework of state rights and duties? A perfect starting point is the Charter of the United Nations. This charter, created shortly after WWII—a period of gross violations of international law and human rights—primarily addresses the threat or use of force against states' territorial integrity or political independence. It establishes obligations of non-intervention in matters that fall essentially within any state's domestic jurisdiction.[897] Other

896 Ibid., page VI, Preface.

897 "*United Nations Charter (full text),*" (United Nations, San Francisco, 1945), accessed on May

than that, it is mostly an instrument focused on maintaining peace and stability. It achieves this by establishing procedures to prevent armed force and implementing international mechanisms to promote the economic and social advancement of all peoples.[898]

It is noteworthy that the UN discusses both the rights and duties of nations/states *and* peoples.[899] According to Holland, a 'people' is a large number of human beings, united by a common language and by similar customs and opinions, resulting usually from common ancestry, religion, and historical circumstances.[900] A 'state,' on the other hand, is a numerous assemblage of human beings, generally occupying a certain territory, among whom the will of the majority, or of an ascertainable class of persons, is by the strength of such a majority, or class, made to prevail against any of their number who oppose it. A people is a natural unit, a state an artificial one.[901]

Work on collective rights, as opposed to individual rights, usually focuses on people's rights. The United Nations Declaration on the Rights of Indigenous Peoples exemplifies this, ensuring peoples' right to self-determination—allowing them to freely determine their political status and pursue their economic, social, and cultural development.[902] Another example is the African Bill of Peoples' Rights, which codifies both individual rights and duties, as well as the rights of peoples—specifically their protection against colonialism.[903]

However, according to Dutch jurist and professor emeritus Theo van Boven (1934), politicians and diplomats defending government and state interests find the notion of peoples' rights both controversial and contentious. Likewise, many legal experts do not feel at ease with this notion; they question the legal nature of peoples' rights.[904]

	7, 2024, https://www.un.org/en/about-us/un-charter/full-text, Article 2
898	Ibid., PREAMBLE.
899	Ibid., Article 1: "*The Purposes of the United Nations are: To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;*"
900	Holland (1916), Chapter IV, page 46.
901	Holland (1916), Chapter IV, page 46.
902	"*United Nations Declaration on the Rights of Indigenous Peoples,*" (United Nations, Resolution adopted by the General Assembly on 13 September 2007), Article 3.
903	"*African Charter on Human and Peoples' Rights,*" (Banjul Charter, adopted June 27, 1981, entered into force Oct. 21, 1986), Preamble: "*Conscious of their duty to achieve the total liberation of Africa, the peoples of which are still struggling for their dignity and genuine independence, and undertaking to eliminate colonialism, neo-colonialism, apartheid, zionism and to dismantle aggressive foreign military bases and all forms of discrimination, particularly those based on race, ethnicgroup, color, sex. language, religion or political opinions;*"
904	Boven, Theo van, "*Human Rights and Rights of Peoples,*" (European Journal of International Law 6(1), January 1995), page 471.

This skepticism stems from a fundamental issue with the concept of peoples' rights: the endless variations of groups sharing common ancestry, religion, and historical circumstances. As UN Secretary-General Boutros Boutros-Ghali explained,

> *"If every ethnic, religious or linguistic group claimed statehood, there would be no limit to fragmentation, and peace, security and economic well-being for all would become even more difficult to achieve."*[905]

At this point in time, states remain the institutions that codify and protect our rights. Recognizing 'peoples' as independent actors compounds legal complexity. The will of the people expresses itself through state sovereignty, and deviating from this principle would require a revolution in every state—an unlikely and undesirable scenario. Moreover, dividing states into various peoples fuels the potential for civil strife. As a result, van Boven observed that it has become the general interpretation that people's rights are to be expressed within the framework of a state.[906]

This presents a dilemma for the crypto community members who believe their digital networks can become actors in the international legal sphere: if peoples with real connections have not been granted this position, why would it be granted to people with no connection but the Internet? In modern discourse, many of the world's governance problems are assigned to the governments of states. However, no viable alternative exists. As explained in this book, global governance as currently envisioned conflicts with principles of sound government. Moreover, the consent of states forms the foundation of this system anyway. In fact, the state serves as the foundation of all legal systems. Radical fragmentation into digital jurisdictions would result in cities with atomized citizens associated with people from all over the world but not with their neighbors—an unworkable situation. The far more obvious solution is the same as it was during the time of Rome: liberty. By reestablishing both individual and state liberty, subsidiarity can become the foundation of the legal system. Formalizing this within the existing structure represents the simplest solution—one that opens the path for the next wave of legal globalization at the appropriate law-making layer: the private, decentralized one.

905 Boutros-Ghali, Boutros, "*An Agenda for Peace; Preventive diplomacy, peace-making and peace-keeping, Report of the Secretary-General pursuant to the statement adopted by the Summit Meeting of the Security Council on 31 January 1992,*" (United Nations, Doc. A/47/277-S/24111), para. 17.

906 Boven (1995), page 471: "*...the promotion and protection of peoples' rights has to be pursued primarily within existing State structures.*"

§ 17.3. Reimagining State Rights and Duties

> *"But the body politic, i.e. the sovereign, owes its very existence to the sanctity of the [social] contract; so it can never commit itself, even to another state, to do anything that conflicts with that original act—e.g. to alienate any part of itself, or to submit to another sovereign."*
>
> ~Jean-Jacques Rousseau

Conventional international law, naturally, did not concern itself with the rights of states. States, after all, were sovereign and free to act. The focus was on codifying the duty of civility between states. International law imposed duties; it did not impose rights. But rights and duties are intertwined. When at the state level we talk about duties to one another, does this not automatically lead to rights? If a state has rights, what does this look like? Individual rights are traditionally recorded in constitutions. In contrast, international law has no constitution. Treaties, customs, rulings, and the regulations of IOs make up its structure. This international law layer expands unchecked. While this particular development is recent, the problem itself is not new. States infringe on the liberty of their subjects all the time. To keep state governments in check, the wise men of state invented safeguards such as a bill of rights and the separation of powers. In essence, a bill of rights not only assigns rights to citizens, but it also equally assigns the duty to guard these rights to the state. In addition, an extensive international framework of treaties establishes institutions to monitor rights transgressions, even setting conditions for foreign intervention.[907] However, no safeguard protects either states or individuals from the overreach of this international framework and its ideologies and 'standards.' That is where state rights come in.

Methodology

What constitutes the rights and duties of a state? Unlike the abundance of theoretical works and documents codifying individual rights, nothing exactly like it exists for state rights. Fortunately, both official bodies and academics have explored the idea of rights and duties for states. The 1933 Montevideo Convention, for example, provides a rough overview of what constitutes a state and its rights and duties.[908] Next, a United Nations draft bill of state rights, a non-formalized international law instrument, provides ideas on rights and duties—especially duties—and, like most

907 "*United Nations Charter (full text),*" (United Nations, San Francisco, 1945), accessed on May 7, 2024, https://www.un.org/en/about-us/un-charter/full-text, Article 42.

908 "*Montevideo Convention,*" (1933).

early UN documents, focuses on the law of peace.[909] Rawls created a list of rights and duties for collectives, albeit for peoples and not states.[910] Another list can be found in Brierly's authoritative book *Law of Nations*.[911] Combining these lists revealed a surprising consistency among the various sources. Extracting a list of ten articles on the basic rights and duties of states proved an easy task. This list forms the foundation of the declaration.

The novel challenge lies not just in balancing the rights and duties of states but in balancing them against the emerging overlapping layer of international law and international institutions. This is a groundbreaking idea because the literature is only beginning to acknowledge the problems caused by institutional overreach. Most people are not aware of the issue, so few look for a solution. Alvarez, mentioned in Chapter 4, criticized the international legal structure's democratic deficit, which includes the absence of elected officials, checks and balances, and public discourse, along with a disregard for basic rights. He further noted a lack of respect for the sovereign equality of states, the existence of ideological biases within these power structures, and a principal/agent gap in policy execution. In addition to reviewing these established criticisms, globalist authors' perspectives on the establishment of a global executive were analyzed to understand their objectives.[912]

909 "*Draft Declaration on Rights and Duties of States with commentaries,*" (United Nations, text adopted by the International Law Commission at its first session, in 1949, and submitted to the General Assembly).

910 Rawls (1999), page 37.

911 Clapham, Andrew, "*Brierly's Law of Nations, An Introduction to the Role of International Law in International Relations, Seventh Edition,*" (Oxford University Press, 2012), § 3. The basis of obligation in modern international law, page 47: "*Writers diff er in how they enumerate what these rights are, but generally five rights are claimed, namely self-preservation, independence, equality, respect, and intercourse. It is obvious that this doctrine of fundamental rights is merely the old doctrine of the natural 'rights of man' transferred to states.*"

912 Lopez-Carlos, Augusto, Groff, Maja, Dahl, Arthur, "*Global Governance and the Emergence of Global Institutions for the 21st Century,*" (Global Challenges Foundation, Sweden, No date), page 1: "*The submission proposes a revised UN Charter, instituting a reformed UNGA directly elected by popular vote and a second civil society-focused chamber. The representatives of the latter would serve as advocates of particular issues of global concern, and the UNGA would see its powers and jurisdiction gradually expanded over time. An Executive Council of 24 members, selected by the UNGA, would take the place of the UNSC. The Executive Council would provide general oversight and ensure good governance, transparency, efficiency and coherence of an effective, new UN system. The UN will have a standing armed force, with the rule of international law forming the centerpiece of the new governance system; peaceful settlements through the ICJ or other mechanisms will be mandatory for international disputes. A new Bill of Rights is to prescribe the parameters for UN action, and the global human rights acquis will be upheld systematically by an International Human Rights Tribunal. A new funding mechanism would link members' indirect tax revenues to the UN budget in a fixed proportion.*"

These criticisms and ideas I measured against subsidiarity and liberty. Subsidiarity results from assigning the correct governance layer. Liberty for states differs from individual liberty since states are sovereign entities. The crux lies in states being fictional persons. Individuals express their free will in action. The state expresses its will through law, from which actions flow. It is the hierarchy of laws that allows the international institutions' legal order to impose superior laws and limit the liberty of states in practice. Liberty can be ensured by mandating the equality of states and maintaining their ultimate authority over their own laws and position in the international legal order. I combined these findings into several statements, added to the list of rights and duties as 'Requirements of the International Legal Order.'

One subtle but significant change I made to Art. 4. It now affirms that states shall *prefer* their duties to protect the rights of their citizens over their duties under international law. Because no matter the urgency, nothing in legal ordering can be more important than preserving liberty. As the state has learned where its authority ends—as indicated by human and civil rights—the international legal order needs to understand where its authority (and ideology) ends as well. We need to rebalance who regulates what. Nation-states are not perfect but are the only legitimate expression of sovereign will. The Declaration of State Rights and Duties (DoSR) represents a first step to subsidiarity. Together with the DBoL, this framework establishes legal autonomy that enables industry self-regulation at the private law creation level, thus paving the way for decentralized cooperation.

The DoSR was published on February 27, 2025, on the Ethereum blockchain.[913] Explanations of its use are found on GitHub.[914] A PDF version was published on the InterPlanetary File System under its author's name and an open-source license.[915]

The Use of the Declaration

Uploading a single document to a blockchain does not alter the world's legal framework overnight. After all, changes at this level of law-making require consensus among representatives of multiple governments. It is merely the first step in offering an alternative vision for a multi-polar world and inspiring a more informed debate on the proper role of international regulation. The original set of ideas on human rights published by Lauterpacht led first to a non-binding formal

913 "*Contract 0x1855cc1cd697baf8a014c5bae7f18505f855aca6,*" (Etherscan, Feb-27-2025 05:12:59 AM UTC), https://etherscan.io/tx/0x7efc964bf802e118c9ca36d477d4ca27ac6b503ef2922be9e2e8e390df06a894

914 "*Declaration of State Rights and Duties,*" (Github, March 13, 2025), accessed on March 13, 2025, https://github.com/decentralized-law/state-rights.

915 "*Declaration of State Rights and Duties,*" (IPFS, February 27, 2025), accessed on March 13, 2025, https://ipfs.io/ipfs/bafkreihse425qqhba26kcfpjkgqr73dsu3zxopniivjwlqzcfiii25xqr4

declaration, which in turn led to formalization in various treaties. This DoSR might lead to formalization one day as well!

The efforts of lobbyists, NGOs, IOs, and foreign affairs departments, who circumvent legitimate administrations by using international law as a back door to enforce their objectives, must be challenged. Change is needed. Especially since the international regulation in force today is incompatible with peer-to-peer technology. If the future is to be more decentralized, the law should reflect and facilitate this. Without coordinated action on this level of law-making, the decentralized economy cannot happen. We cannot allow this decision to be made for us by unelected bureaucrats catering to special interest groups. Only the people's representatives can make such a fundamental decision.

The will to limit the power of supranational institutes should not only exist in the hearts and minds of citizens but become part of the soul of both parliaments and executive branches. International treaties should be clearly understood as limitations on the sovereign will—and treated as a change to the constitution itself.

Within a fair and balanced system of laws, international law needs several crucial limitations. First, it must be constrained by basic natural rights—there are certain things it cannot regulate. Second, it must be restricted in setting public policy, which should remain the domain of national governments with their established checks and balances. Third, international law should limit itself to supporting the legal system by creating a fair and balanced playing field rather than serving as a supranational executive. Fourth, when invoked through emergencies, international law must have clear limits in both scope and duration, lest we find ourselves living in a permanent state of emergency.

In addition to placing clear limitations on the reach and scope of international law, states themselves can include several safeguards to protect them from overreaching globalization. First, states must weigh existing treaties in relation to their constitution and natural rights. For instance, in the legal hierarchy, property rights take precedence over claims about combating imaginary crimes. Second, future international agreements that restrict individual rights should require either a referendum or a supermajority of 70 percent of the vote. Third, no regulatory organizations with ongoing mandates should become permanent governing institutions, since policies affecting individual lives must remain subject to sovereign control. Fourth, states should impose restrictions on influential NGOs and foundations, requiring access to clear reporting on activities and funding sources under a two-click principle.[916]

916 Author: under the 'two-click principle,' websites must transparently display both funding sources and their intended purposes. A small group of wealthy donors frequently hides behind NGOs and even treaty-established international organizations, often advancing policy agendas that diverge from the organizations' stated missions.

Fifth, they should limit the influence of alarmist policies, states of emergency, and end-of-world scenarios. While global cooperation on certain topics is necessary and desirable, it should not arise from panic and compromise individual rights, state sovereignty, or common sense. Finally, states must create awareness among their citizens about how this process operates, particularly during times of claimed emergencies that supposedly need worldwide solutions.

In short, there should be a clear and honest debate about the influence of international legal layers. By publishing this declaration in a decentralized fashion and enacting it on the blockchain, it can serve to establish immutable, permanent, and universally accessible principles to guide humanity toward healthier forms of international cooperation.

§ 17.4. Summary and Interpretation

Key Takeaways:

- International governance systems try to achieve policy objectives without checks and balances and erode national sovereignty through excessive treaty-making.
- International regulators oppose peer-to-peer finance, threatening financial liberty.
- The solution is to establish clear limitations on what international law can govern.
- A legitimate international order must accommodate multiple political communities with different self-determined identities.
- States should remain free to focus on their core responsibilities of distributing equal rights and duties to citizens.
- Creating a unified global government with proper checks and balances is unfeasible, as it would either become despotic or fragment due to civil strife.
- The concept of peoples' rights exists but remains controversial and impractical to implement outside the nation-state framework.
- Digital networks cannot realistically become actors in international law.
- States remain the primary actors in international law and the legitimate expression of sovereign will.
- A decentralized Declaration of State Rights and Duties (DoSR) introduces necessary checks on international power, similar to how a bill of rights protects citizens from state overreach.

- The DoSR draws from existing documents on state rights, including the 1933 Montevideo Convention, the UN Draft Declaration on Rights and Duties, and the writings of various international law experts.
- The DoSR considers modern challenges of global governance and applies principles of subsidiarity and liberty. It protects state liberty while enabling international cooperation.
- The DoSR serves as a first step toward reforming international legal frameworks, halts the circumvention of good governance principles, and ultimately establishes the liberty in which a self-regulated decentralized economy can flourish.

Declaration of State Rights and Duties

PREAMBLE:

Whereas all states are equal in dignity and rights and represent the interests of their people, they should act toward one another in a spirit of brotherhood,

Considering that the equal and inalienable rights of all states are the foundation of freedom, justice, and peace in the world,

Recognizing that states, as fundamental legal actors, embody collective free will and establish an international legal order,

Acknowledging that the international legal order poses opportunities and challenges to the self-determination of states and peoples, affecting the liberty of individuals,

Observing that the international legal order imposes duties upon states through undemocratic processes that violate sovereign equality, advance particular ideologies, and lack fundamental checks and balances,

Understanding that state rights and duties exist independent of the jurisdiction of any entity within the society of nations,

DECLARING THE FOLLOWING STATE RIGHTS AND DUTIES:

Article 1

Every state has the right to equality in law with every other state.

Article 2

Every state has the right to exercise jurisdiction over its territory and all persons and things therein.

Article 3

Every state has the right to independence and, therefore, to freely exercise all its legal powers without dictation by any other state, including the choice of its own form of government. Every state has the duty to respect the independence and form of government of all other states.

Article 4

Every state has the duty to treat all persons under its jurisdiction with respect for fundamental rights and freedoms and must prioritize these above other duties.

Article 5

Every state has the right to enter into treaties with other states and the duty to fulfill in good faith its treaty obligations.

Article 6

Every state has the right to defend its integrity and independence; to provide for its conservation and prosperity; to consequently organize itself as it sees fit; to legislate upon its interests and administer its services; to define the jurisdiction and competence of its courts; and to regulate its economy and resources.

Article 7

The territory of a state is inviolable and may not be the object of military occupation nor of other measures of subversion or force by another state, whether imposed directly or indirectly, for any motive, even temporarily.

Article 8

Every state has the duty to refrain from intervening in the internal or external affairs of any other state and from fomenting civil strife in the territory of another state.

Article 9

Every state has the duty to settle its disputes with other states by peaceful means and refrain from resorting to war as an instrument of national policy. States are to always observe established restrictions in the conduct of war.

Article 10

Every state has the right to individual or collective self-defense against armed attack and other forms of harmful interference in its sovereign affairs.

LIMITATIONS TO THE INTERNATIONAL LEGAL ORDER:

No state is subject to a permanent suprastate executive. A state of emergency cannot establish a permanent suprastate executive over a state. No state may be subject to a permanent international force. No state is subject to a permanent international court or regulatory body without its consent. No state may be taxed or regulated by non-state entities. No state may be denied its right to create and enforce its own laws, to engage in commerce and financial transactions, or to create and use a monetary system.

XVIII

Freedom of the Nodes

> *"The following things are by natural law common to all—the air, running water, the sea, and consequently the seashore. No one therefore is forbidden access to the seashore"*
>
> ~*Institutes* of Justinian

When Pope Alexander VI in 1493 divided the newly discovered lands outside Europe between Portugal and the Crown of Castile along a meridian 370 leagues west of the Cape Verde islands, he undoubtedly believed he had the authority to do so. The Portuguese empire's subsequent claim to all oceans east of this demarcation line was understandable. However, this decision would, inevitably, lead to confrontations with all the other peoples living on this planet who had claims and interests. Moreover, it contradicted the well-established concept of free use of the oceans in what was then known as the law of nations.

The fiercest opposition to the papal bull would come from other European colonial powers. The Dutch empire had started exploring the world, sending its ships across the globe. This led to the famous confrontation in the Andaman Sea between a Dutch ship and a Portuguese one. The Dutch claimed self-defense, and the Portuguese claimed jurisdiction over all the oceans. In the ensuing legal disputes, a body of knowledge was developed that came to be known as Mare Liberum (the freedom of the seas), acknowledging the common use of the oceans for all nations. This concept survives to this day as 'freedom of the seas,' one of the mainstays of international law.

Five centuries later, another small group of European-based institutions is claiming jurisdiction over a foundational aspect of the law of nations: property rights and free exchange. They are aiming to control financial transactions, including those using innovative blockchain systems such as Bitcoin. As it happens to be, the sixteenth-

century critiques of the overly ambitious Iberian empires can be directly applied to today's equally ambitious global regulators.

§ 18.1. The Freedom of the Seas

The intellectual foundation for the freedom of the seas can be found in the work of Hugo Grotius. *The Laws of Prize and Bounty* contains a chapter called *Mare Liberum* that provides four reasons why the seas should remain open to all:[917]

- Access to all nations is open to all, not merely by the permission but by the command of the law of nations.
- Infidels cannot be divested of public or private rights of ownership merely because they are infidels, whether on the ground of discovery, in virtue of a papal grant, or on grounds of war.
- Neither the sea itself nor the right of navigation thereon can become the exclusive possession of a particular party, whether through seizure, through a papal grant, or through prescription (that is to say, custom).
- The right to carry on trade with another nation cannot become the exclusive possession of a particular party, whether through seizure, or through a papal grant, or through prescription (that is to say, custom).

1) Rights at Open Sea

In the existing state of affairs, Grotius argued, it has come to pass that one nation supplies the needs of another. Consequently, anyone who abolishes this system of exchange abolishes the highly prized fellowship in which humanity is united. He destroys the opportunities for mutual benefactions. In short, he does violence to nature herself. Therefore, the right to engage in commerce pertains equally to all peoples. How unjust then, asked Grotius, was the situation in which persons desirous of commerce with peoples who share that desire are cut off from the latter by the intervention of men who are not invested with power either over the said peoples or over their trade route? Access to all nations is open to all, not merely by permission but by the command of the law of nations.[918]

People need trade for survival. If they wish to engage in trade, they have the right to do so. More crucially, the networks of trade—in this case the open oceans—must remain open for everyone to use for their benefit. These principles equally apply

917 Grotius, *"Commentary on the Law of Price and Bounty,"* (2006), Chapter XII, page 96.

918 Ibid., Chapter XII, Thesis I, [Author: summary of various sections].

to digital waterways, which in a short time have become as vital for facilitating commerce and providing humanity what it needs to flourish as the open seas.

2) Rights of Infidels

One of the arguments raised by the Portuguese was that their authority over the seas was granted by the pope and thus came directly from God. Grotius, on the other hand, claimed that the pope could not have made such claims because the land was clearly occupied and divided into property before this declaration. Moreover, the Church could not claim jurisdiction over those it, at the same time, labeled infidels. Infidels cannot be divested of public or private rights of ownership merely because they are infidels, whether on the ground of discovery, in virtue of a papal grant, or on grounds of war.[919]

Speaking of the rights of infidels is indicative of the paternalistic attitude of European empires at the time. Unfortunately, this paternalistic mentality lingers. The broader definition of infidel extends beyond those who do not follow the Christian faith. It can mean "one who doubts or rejects a particular doctrine, system, or principle."[920] AML legislation is produced in Europe by a small group of regulators. In its guidance on cryptocurrencies, the FATF specifically orders its stakeholders to identify and scrutinize transactions involving jurisdictions "lacking in regulation, supervision, or appropriate controls" (as determined by the FATF).[921] In practice, anyone must follow the modern AML and global governance faith or face restrictions in their use of the financial system and the digital waterways. Entire nations are currently cut off from engaging in transactions with the rest of the world. Moreover, various cryptocurrency initiatives exist in jurisdictions without supervision or controls, such as in South African slums,[922] because people lack access to basic financial services. If we pursue the FATF logic to the end, these people are not in compliance

919 Ibid., Chapter XII, Thesis II, [Author: summary of various sections].

920 "*Infidel,*" (The Free Dictionary), accessed on May 6, 2024, https://www.thefreedictionary.com/infidel

921 FATF (2021), page 40: "*In addition to P2P transactions, the FATF has identified other potential risks which may require further action, including; VASPs located in jurisdictions with weak or non-existent AML/CFT frameworks (which have not properly implemented AML/CFT preventive measures) and VAs with decentralised governance structures (which may not include an intermediary that could apply AML/CFT measures). These risks may require countries or VASPs to identify VASP- or country-specific risks and implement specific safeguards for transactions that have a nexus to VASPs and countries lacking in regulation, supervision, or appropriate controls based on these risks.*"

922 Vivier, Hermann, "*Bitcoin Ekasi: The Township One Year Later, Modeled after Bitcoin Beach, a South African township attests to the opportunities of a bootstrapped bitcoin economy,*" (Bitcoin Magazine, Aug 16, 2022), accessed on May 6, 2024, https://bitcoinmagazine.com/culture/bitcoin-ekasi-township-one-year-later

with AML standards. If they succeed in piecing together a payment system, South Africa will be expected to clamp down on it or risk having the entire nation cut off from international payment systems and funding. History has shown that the imposition of AML controls has had an impact on access to and the availability of financial services in developing countries.[923] In short, what is emerging is a globally connected system where everyone must play by rules set in places like Paris and Basel or be excluded.

Are there no similarities between a declaration of the pope and one from the FATF or the OECD? Is international law the new gospel? Should a small group of European regulators determine the conditions of transactions for people around the world and control the technologies they can use to make these transactions? If we accept this, the current financial system is no better than fifteenth-century religious colonialism.

3) No Ownership, No Jurisdiction

Let us ascertain, asked Grotius, whether the Portuguese were able to bring the sea, matters of navigation, or the conduct of trade under their own jurisdiction. The answer is no. The sea, since it is as incapable of being seized as the air and cannot have been attached to the possessions of any particular nation. A ship sailing over the sea no more leaves behind itself a legal right than it leaves a permanent track. Neither the sea itself nor the right of navigation thereon can become the exclusive possession of a particular party. And what shall we say, Grotius continued, of one who obstructs merely navigation upon those waters, despite he himself suffering no loss in consequence of such navigation?[924]

The same logic applies today; decentralized financial technologies are not owned by one person. Moreover, they are not owned or controlled by residents of any single state. In fact, they cannot be owned or controlled by people living under one jurisdiction. As such, no single state or supranational organization can claim

923 Bester, H., Chamberlain, D., de Koker, L., Hougaard, C., Short, R., Smith, A., and Walker, R., "*Implementing FATF Standards In Developing Countries And Financial Inclusion: Findings And Guidelines,*" (G:ENESIS, Washington, D.C. May 2008), page vi: "*The imposition of AML/CFT controls can and did have an impact on access to and usage of financial services in the countries concerned. The most vulnerable clients are those who lack the prescribed identification documents, undocumented migrants and clients of institutions (such as money services businesses) whose links with formal financial institutions are severed for AML/CFT reasons. AML/CFT controls also tend to increase transaction costs which can cause financial institutions to withdraw from low-value transactions and client markets using these.*"

924 Grotius, "Commentary on the Law of Price and Bounty," (2006), Chapter XII, Thesis III, [Author: summary of various sections].

jurisdiction over all 'nodes' in a decentralized network. They serve the benefit of all humanity, without favor or judgment.

Additionally, the emergence of decentralized networks has resulted in decentralized assets. States have demonstrated their recognition of basic property rights through their eagerness to tax these assets. But property rights work both ways. With the right to tax comes the duty to protect these assets—especially from those operating outside of the social contract. After all, one foundational task of the state is to facilitate the peaceful division and transaction of property. Following Grotius's reasoning from five centuries ago, what shall we say of those who obstruct the free use of property they neither own nor have jurisdiction over? At what point did property rights become conditional on the ideologies and policies of foreign actors?

4) Right to Trade

Under the law of nations, Grotius said, the following principle was established: that all men should be privileged to trade freely with one another, and they may not be deprived of that privilege by any person. Since the need for this principle existed as soon as distinctions of ownership had been drawn, it is clearly ancient in origin. After all, Aristotle already acutely observed that barter supplies what nature lacks to properly meet the needs of all men. And because distances between regions prevented men from using many of the goods desirable for human life, this process of barter was devised in order that one person's lack might be remedied by means of another person's surplus. Therefore, according to the law of nations, the privilege of barter must be common to all. As such, the right to carry on trade with another cannot become the exclusive possession of a particular party, whether through seizure, through a papal grant, or through prescription (that is to say, custom).[925]

It is a well-established fact that the rights to private property and its exchange are unalienable rights. Any state not honoring the property rights of individuals and their right to free exchange is operating unlawfully under natural law. It undermines its own legitimacy, because what good is a state that cannot protect the basic rights of its citizens? Whether a state operates alone, in cooperation with others, or on account of a higher ideal makes no difference.

The use of technology and the management and exchange of property are essential to human life. No single person in modern society owns all he needs to survive. Using technology and regulations to restrict commercial transactions can be considered as much an attack on private property as an attack on life and liberty itself. Just as no single party should be allowed to deprive humanity of the use of electricity,

925 Ibid., Chapter XII, Thesis IV, [Author: this paragraph is a summary of various sections, including a quote by Aristotle].

telephones, refrigerators, or email, no single party can be allowed to restrict open-source technology used for voluntary transactions. To think one is entitled to do so is no different from a pope claiming divine authority to divide the entire world into the property of two men.

§ 18.2. Liberating Decentralized Networks

The Portuguese wanted to restrict access to the oceans for all other vessels but their own. Hidden behind the arguments of spreading the one true faith were the real motives of money, power, and control. After all, the next step was of course the levying of tax on all trade crossing this liquid territory. Forcing the use of a debt-based monetary system on the world at interest while restricting transactions that challenge this monopoly represents a similar form of colonialism. Although this time it was not forced upon specific peoples but upon humanity in its entirety and at its core.

There is also the issue of practicality. No country could claim jurisdiction over the sea without forcefully limiting the trading rights of all other nations. Restricting access to digital payments to only approved methods and approved purposes violates many foundational rights, including basic property rights and rights to trade, privacy, and freedom of association. These policy objectives can only be enforced through tyrannical laws and enforcement infrastructure, which we see being developed around us.

At their core, accessing and using decentralized networks are rights that should be available to everybody. One small group of European regulators should not have blanket authority to restrict property rights and the right to free exchange. They may be delegated limited authority for standard-setting to facilitate trade and voluntary interaction across borders but not much more.

As with the open sea, men cannot possess any rights in decentralized and open-source technologies beyond those related to common use. This remains a practical reality. Even if governments aim to regulate a decentralized network that is free to access and based on open-source code, they would not be able to do it. Establishing unenforceable laws results in endless controversy—something law should aim to prevent. Banning the use of novel decentralized technology rivals banning the printing press or sailing over the ocean—both of which would be megalomaniacal, unjust, and ultimately unenforceable.

I propose to apply the concept of the freedom of the seas to decentralized networks. At its core, no small group of people can legitimately restrict technology. I call upon

all states and institutions to recognize that the benefits of free transactions and trade outweigh the interests of established financial powers with their outdated systems and globalist policy objectives. The use of these beneficial technologies should be recognized as unalienable rights of all human beings. This concept shall be known as Freedom of the Nodes (FotN).

Practical Considerations

The 1982 Law of the Sea Convention (LoSC) confirms that all states enjoy the freedoms of the high seas[926] and that no state may subject any part of the high seas to its sovereignty.[927] Ships of all states enjoy the right of innocent passage, not just on the open seas but even through territorial waters.[928] The freedom to navigate the open seas is an unalienable right. The same applies to the navigation of decentralized networks.

This modern regulatory framework further suggests how to treat property rights when no single jurisdiction has the authority to assign them, as is the case with, for example, land rights. One approach is to treat crypto tokens, such as those mined on the Bitcoin network, similarly to seabed resources. No one can claim or acquire territory on the deep seabed or rights to its resources. According to the LoSC, these are "the common heritage of mankind."[929] It explains that "no state shall claim or exercise sovereignty or sovereign rights" over any part of the deep seabed or its resources.[930] However, under certain conditions, minerals can be extracted and alienated.[931] The main lesson is that there is precedent for property rights emerging from a jurisdictional void and belonging to asset holders, who may then transfer those assets freely.

There is, however, one area where the open seas and decentralized networks differ. Participants in blockchain technology do not go anywhere when they go online; they do not move out of their jurisdiction. The open seas, on the other hand, consist of real places on Earth that are beyond state jurisdiction. To prevent activity at sea from being exempt from laws, every ship is required to have a nationality. States have jurisdiction over ships flying their flags on the high seas, and they may

926 United Nations, "*Convention on the Law of the Sea,*" (Montego Bay, 10 December 1982), Art 87.

927 Ibid., Art. 89.

928 Ibid., Art. 17.

929 Ibid., Art. 136.

930 Ibid., Art. 137, 1.

931 Ibid., Art. 137, 2 & 3, [Author: the LoSC states that minerals can only be extracted in accordance with various regulations and procedures of the International Sea Bed Authority. The reason for this is to prevent disputes and unfair advantages of developed countries, and to account for environmental considerations and an equal distribution of wealth.]

apply their laws (such as tax and criminal laws) to all on board irrespective of their nationality.[932] Such registration arrangements are not needed on decentralized networks, since all participants themselves remain under existing laws.

FotN concerns itself not with altering existing laws or establishing rules to prevent conflict of law. It establishes a decentralized, abstract source of property rights. The state's main task is to protect these rights. Naturally, states can apply additional rights and duties, such as tax laws, to persons under their jurisdiction who own such assets. FotN merely ensures that ownership and transactions in decentralized assets remain available to each human being. Liberty in code, protected by liberty in law. It guarantees ownership and transactional rights on decentralized networks. It is the practical implication of the inalienable rights to own, use, and exchange property and transact freely in a medium of exchange of choice—and thus express one's free will across the globe.

FotN further helps explain specific kinds of transactions unique to the blockchain: transactions without a known counterparty. This dynamic comes into play with atomic swaps or DeFi. In these cases, the owner of an asset transacts with the network by using a smart contract to exchange one type of crypto asset for another. There is no need to involve the law, since the network secures these transactions, and individuals using this network do not need to be protected from themselves. Much of the traditional investor protection legislation has become unnecessary due to the secure, open-source code and the absence of third-party risk.

Methodology

There are those who believe they must protect the world from the blockchain's dangers. However, the network's design provides its own protection. In those areas where open-source code and math govern, oversight is no longer needed. When governments and regulators accept this reality, we can have a mature discussion about what requires regulation and what does not.

In practice, like the Portuguese claimed jurisdiction over the open sea, states and international regulators claim jurisdiction over access to (decentralized) technologies. This process is understandable since the crypto space has been rife with scandals. However, most serious violations were committed by specific actors who engaged in activities already prohibited by law—not by the technology or the decentralized networks themselves. What is needed, then, is a way to distinguish between proper decentralized networks and those hiding scams and unlicensed

932 Ibid., Art. 92 (1) and Art. 94 (2b)

financial activity behind a veil of technological jargon. The first category can operate freely and does not need regulation, while existing regulations govern the second.

For decentralized networks to fall under the FotN, they must satisfy four criteria: contain native assets, be governed by open-source code, be sufficiently decentralized, and be free and accessible to all.

Containing Native Assets

The native asset requirement limits FotN to asset-based decentralized networks. The requirement that assets be native means they must exist independently of rights and duties defined by any single jurisdiction's legal system—*as this would undermine decentralization*. Only assets free from regulatory and third-party risk can provide a foundation for a truly decentralized network. This ensures a neutral base for the digital economy. One where applications—each having its own set of unique rights and duties—can be built on top without being hindered by legal uncertainty at the base layer.

Governed by Open-Source Code

Open-source code benefits everyone by allowing common ownership and universal use. It allows for the cooperation of large numbers of people along uniform standards in a democratic and voluntary way. Anyone can download the decentralized network code and submit suggestions for improvement. Because no single person owns open-source code, it cannot fall under one jurisdiction. This is crucial to prevent legal uncertainty for participants of the network.

Decentralized networks should be (largely) governed by code, not by one person or even a few persons. Governance by code means a protocol runs according to fixed parameters, where only limited changes are possible that require acceptance from network participants to take effect. A network governed by code can therefore not be adjusted to the specific rights and duties associated with a single jurisdiction.

Sufficiently Decentralized

The term *sufficiently decentralized* was used in an official capacity by William Hinman of the Securities and Exchange Commission in the U.S.

He summarized it as a token or coin whose purchasers would no longer reasonably expect a person or group to carry out essential managerial or entrepreneurial efforts.[933] He hinted at the inability to establish and enforce jurisdiction over

933 Hinman, William, "*Digital Assets Transactions: When Howey Met Gary (Plastic), Remarks at*

decentralized networks due to the lack of legal personality of the network itself and the absence of key persons needed to run the network. Building on this, sufficient decentralization demands that the technology forms a network wherein the following applies:

- No single person or identifiable group controls access to the technology.
- No single person or identifiable group carries out essential managerial or entrepreneurial efforts.
- No single person or identifiable group can restrict specific transactions or exclude specific persons.

Universally Accessible

The technology supporting the decentralized network and its transactions must be publicly available through standard consumer devices, without discrimination or special permission. All software required to support or use the network must be freely downloadable via the Internet. Any person may use the code and network to create applications for private or public purposes. Access control introduces third-party risk, resulting in specific rights and duties and thus attracting the law. A decentralized network should be available for use, without conditions, for every human being.

The resulting FotN principle was published on February 27, 2025, on the Ethereum blockchain.[934] Explanations of its use are found on GitHub.[935] A PDF version was published on the InterPlanetary File System under its author's name and an open-source license.[936]

the Yahoo Finance All Markets Summit: Crypto," (Securities and Exchange Commission, San Francisco, CA, June 14, 2018), accessed on May 6, 2024, https://www.sec.gov/news/speech/speech-hinman-061418: "*as a network becomes truly decentralized, the ability to identify an issuer or promoter to make the requisite disclosures becomes difficult, and less meaningful.*"

934 "*Contract 0x4A4b427c7C5417e6C50999ab546064b751e0365b,*" (Etherscan, Feb-27-2025 07:05:23 AM UTC), https://etherscan.io/address/0x4A4b427c7C5417e6C50999ab546064b751e0365b

935 "*Freedom of the Nodes,*" (Github, March 13, 2025), accessed on March 13, 2025, https://github.com/decentralized-law/freedom-of-the-nodes

936 "*Freedom of the Nodes,*" (IPFS, February 27, 2025), accessed on March 13, 2025, https://ipfs.io/ipfs/bafkreigrzc2rxfwsklzr3ayrqwxnnubsmmzgwrotjhojpny4lxxi6rmyvi

Freedom of the Nodes

The principle of Freedom of the Nodes establishes that decentralized networks—when containing native assets, governed by open-source code, sufficiently decentralized, and universally accessible—may be freely used without conditions by every human being.

Containing Native Assets

Assets are considered native when they exist only on a decentralized network and independent of any single jurisdiction's legal system of rights and duties.

Governed by Open-Source Code

Governance by code means the decentralized network's protocol runs according to fixed parameters where only limited changes are possible and require acceptance from network participants to take effect. Open-source means anyone can download and suggest improvements to the network's code, and because no single person owns it, it does not fall under one jurisdiction.

Sufficiently Decentralized

Sufficiently decentralized means that the technology forms a decentralized network where no single person or identifiable group controls access to the technology, carries out essential managerial or entrepreneurial efforts, or can restrict specific transactions or exclude specific persons.

Universally Accessible

Universally accessible means that the technology supporting the decentralized network and its transactions must be publicly available through electronic devices without discrimination or special permission. All required software must be freely downloadable and any person may use the code and network to create applications for private or public purposes.

XIX

The Decentralized Legal System

> *"Since no man has a natural authority over his fellow, and force creates no right, we are left with agreements as the basis for all legitimate authority among men."*
>
> ~Jean-Jacques Rousseau

Having established the foundations of liberty, we shift our focus to legal empowerment. Throughout, this book has advocated for organizing society around principles of private voluntary law. This chapter introduces the Decentralized Legal System (DLS), the first functional legal system integrating blockchain technologies with existing law. The DLS is essential in the creation and enforcement of Decentralized Law (DeLaw). Unlike traditional systems enforced by governmental authorities, this system is created and accepted through a public, open-source process. A system that is flexible and adaptable to various needs. A system that connects through cyberspace but carries force in the real world. This framework can govern all types of decentralized legal applications mentioned in the book, and many future ones as well!

Within the hierarchy of law, the DLS represents law-making at the private layer. Existing governing law systems both empower and limit this type of law. By acknowledging and accepting this reality, blockchain projects can now choose standards to regulate themselves where possible. Using this idea, the industry can shape how regulations for decentralized projects develop. These standards may eventually become incorporated into higher governing layers (as happened many times before).

Creating disruptive technology is one thing. Integrating it with the real world and shaping the legal system to facilitate it is another. We must now consider proper governing laws and enforcement systems. We must build a bridge between law and tech. To do this, we first need a way to expand private law to groups of individuals. We need a way to turn private contract into binding law.

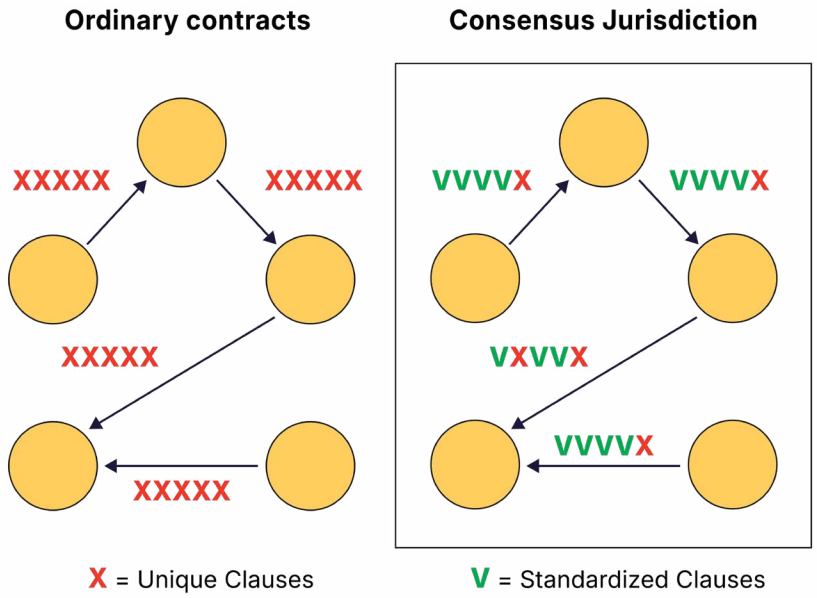
§ 19.1. Consensus Jurisdictions

> *"Where altruism is not unlimited, a standing procedure providing for such self-binding operations is required in order to create a minimum form of confidence in the future behaviour of others, and to ensure the predictability necessary for co-operation."*
>
> H.L.A. Hart

A jurisdiction contains the power of a court to adjudicate cases and issue orders. Generally, a jurisdiction is limited to a territory within which a court or government agency may properly exercise its power. However, there is another way of establishing jurisdiction: consent. We saw in the chapter on arbitration that contracts can create a private body of law that binds the contracting parties. Why should the number of signatories to a contract be limited?

Technology allows for a collective to sign a contract similar to accepting website terms and conditions. Rather than signing an agreement with a central party, participants sign an agreement with each other. They subject themselves voluntarily to a self-created legal system—a jurisdiction by consensus, where all participants agree to cooperate under a certain set of rules. Participants of such a Consensus Jurisdiction (CJ) could then engage with each other while subject to the wider contract. This approach enables the drafting of private international standards, transforming CJs into law for specific groups, technologies, or industries. A CJ is thus a set of rules that become binding law through participant consent rather than territorial authority.

The image below displays two groups of businesses in the same industry. The first five operate conventionally; all parties must separately agree to terms and conditions for each transaction. The second group of businesses has become part of a CJ. They have agreed upon several standards for all their arrangements (signified with a green check mark). This includes, for example, shipping terms and conditions, refund policies, enforcement mechanisms, and applicable court and law. As a result, their individual arrangements become predictable and less complex. Moreover, the enforcement layer's familiarity with the arrangements will simplify dispute resolution. This saves significant legal costs and negotiating time. Naturally, the system still allows for contract customization and specific individual arrangements. Moreover, using this system is voluntary.



Legally Binding Technology

Two main approaches make CJs legally enforceable:

- By making everybody participating in a CJ (such as a DAO) an automatic party to a governing contract. This is a pure CJ.
- By having a CJ or institution enact a set of guiding principles, which individual parties incorporate and agree to in their private contracts. This is a regular Agreement under Decentralized Principles (ADP).

Option 1 (CJ) represents the more innovative and inspiring tool. It allows for any group of people to come together online and form a legally binding collective. This approach has many applications, including the ambitious but currently legally toothless network state. Alternatively, it could replace centralized shared interest groups with digital trade guilds. Many of the existing DAOs, decentralized marketplaces, and certain forms of DeFi could benefit from this approach as well.

Option 2 (ADP) suits private enterprises or collectives that do not need a fully decentralized setup but wish to use these technologies to engage their stakeholders and set standards. One could think about NGOs and large trade organizations setting industry-wide public standards that individual parties can participate in and adopt. They can do this by using existing DAO tools. Using DAO tools strictly as technological solutions avoids the legal complexities that arise when DAOs attempt to function as corporations. This approach allows decentralized jurisdictions and technology to extend beyond decentralized applications. For comparison, Upwork sets out the framework of millions of freelancers' contracts. Similarly, OPEC sets

guiding principles for oil trading. Neither is a CJ, but such organizations could use these same technologies to engage stakeholders in shaping their guidance.

Under either option, a signed agreement must be in place referencing both general governing principles and specific terms (if applicable). Together, the two legal documents constitute one agreement binding specific parties. In disputes, these documents can be brought before an arbitration court under an overarching governing law (such as English law or the UPICC). The consensus that makes agreements binding can happen at the governance layer (CJ) or the contract layer (ADP).

Subjecting a contract or entire system to this framework requires adding only one additional clause like the one below:

Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity, or termination, shall be referred to and finally resolved by arbitration under the [international arbitration system], which rules are deemed to be incorporated by reference into this clause.

To summarize, CJs allow for the decentralized issuance of governing laws. While the two options offer different approaches to collective legality, they share the same technology and concept: participant consent produces legally binding governing laws. Combining decentralized standards with legally binding contracts paves the way for multiple new business categories in the emerging Web3 industry. Following the FIFA model, institutions could develop blockchain laws and courts.

Contract Incompleteness and the New Lex Mercatoria

The CJ thus derives its value from adding legal context and enforceability to (smart) contracts. But that is not all. From Chapter 8.1 we learned that contract incompleteness presents a major issue—one that smart contract technology has not yet resolved. The CJ can help smart contracts move from purely transactional to more relational frameworks. It introduces greater context and predictability by establishing uniform boilerplate terms and definitions. It could introduce overarching social norms and guiding principles—such as the DBoL—and formalize technical industry standards. It could provide context beyond the limited contract, helping courts understand the entire agreement. This addresses information problems faced by generalist courts, leading to greater predictability and fewer judicial errors. The CJ thus offers a practical solution to the problems posed by incomplete contracts.

Simultaneously, the CJ addresses the overlapping challenges that prevented Lex Mercatoria from truly materializing. Decentralized technologies are ideal for creating objective and universal ‘states’ by ‘remembering’ preceding events or user

interactions. Up until now, this technology has mostly been used as a ledger for transactions. However, it can easily store and maintain a state of law. This allows for the recording and transplanting of customs and best practices. It would enable contract standardization, allowing easy imitation and transplantation across various jurisdictions. The CJ could prove to be the missing piece in the private ordering of the world.

Consensus Jurisdiction Enforcement

As mentioned earlier, private law systems are enforceable in the real world. After all, a framework for enforcing private contracts already exists: the New York Convention. Subjecting a CJ to this framework is as simple as adding a clause to the contract. Provided the correct seat of arbitration and governing laws are chosen, the arbitrators could rule on any dispute arising from the contract. The case can likely be heard online as well. This ruling would be enforceable in most countries.

A CJ legal framework would look as follows:

It is worth remembering that arbitrator jurisdiction remains restricted to the agreed-upon terms. Significant areas of public law remain outside the scope of private contracts and CJs. Examples include criminal or tax law. Private law aims to regulate specific aspects of life, not life in its entirety. Therefore, the initial use cases likely involve industry-specific collaborations with guiding principles for standardized recurring transactions. They are the ideal tool to regulate technological innovation for which, by definition, no laws exist yet. Examples include digital areas like DeFi, tokenization, and smart contracts, as well as non-digital areas such as international trading, e-commerce, and international freelance work. These tools could also help decentralize or democratize the law-making and standard-setting process of existing institutions.

Contracting Metaverse

The Metaverse aligns naturally with CJ principles. Entering a *Contracting Metaverse* could bind participants to specific standards. What happens inside the Metaverse, the presentations, negotiations, and agreements made, can be stored as an immutable record. The general standards and specific variables together form a unique binding agreement. Technologically, a contracting Metaverse combines smart contracts and Metaverse software with a written contract to store what happens in the Metaverse as an immutable record to establish a unique binding agreement.

This setup establishes shared goals, structures party communication, and adopts guiding principles for uncontracted events. This equips smart contracts with two missing elements: a legally binding, enforceable framework and context that addresses inherent contract incompleteness. A recording of what was agreed upon and by whom provides a clear record for all parties, preventing many potential disputes. Furthermore, this record allows arbitrators or judges to understand the agreement clearly and determine associated rights and duties. Creating such environments offers endless benefits for the international business community, particularly when enhanced with technologies like holograms.

Consensus Jurisdictions and the Network State

The Network State, conceived by American entrepreneur and investor Balaji Srinivasan (1980), has gained significant attention in the crypto community. In his book with the same title, Srinivasan provided this definition:

> *"A network state is a highly aligned online community with a capacity for collective action that crowdfunds territory around the world and eventually gains diplomatic recognition from pre-existing states."*[937]

The underpinnings of this idea comprise two crucial concepts. The first is the concept of the state, and the second is the need for recognition. Srinivasan did not cite official sources or conventions when defining what a state is. However, a collection of quotes from popular books and YouTube videos paints a picture similar to what we saw in the Montevideo Convention. He provided insightful arguments explaining the historical fluidity of concepts such as nations and states, opening both concepts up to innovation. He correctly addressed two crucial requirements of a state. The first is the need for having a territory, which he proposed to satisfy

937 Srinivasan, Balaji S., "*The Network State,*" (Published by 1729, July 4, 2022), accessed on March 20, 2025, https://thenetworkstate.com/, page 9.

with an archipelago of crowdfunded physical territories.[938] The second requirement demands diplomatic recognition from at least one legacy state.[939] He neither explained how to achieve this nor why any state would grant such recognition.

Several hurdles must be overcome before this idea can become reality. Chapter 17 provided the first hint of possibilities in this sphere through its discussion of peoples' rights. The general interpretation holds that people's rights must be expressed within the nation-state framework. Deviating from this concept could cause unlimited fragmentation and legal complexity. When recognized peoples with real connections and history lack standing under international law, a random group with no real connection other than the Internet cannot reasonably expect to gain such a favorable position. Even real 'peoples' possessing all required qualifications for state recognition, including territory control, struggle to gain it.[940] Existing states have little incentive to acknowledge new ones—especially in diplomatically sensitive situations—and such recognition rarely occurs. They have no reason to recognize an online community. Abandoning the current framework leaves no basis for themselves being recognized as a state and thus undermines their own legitimacy. Recognition would challenge both their legitimacy and their established legal order. Nation-states have become as fundamental to international law as the core technologies underpinning the Internet are for the Bitcoin network—hard to change. Moreover, many states do not even allow their citizens to have multiple nationalities or permit the ownership of land by foreign persons.

The hope is that once enough land is acquired, it will receive diplomatic recognition. The question then becomes who acquires the land. A single (centralized) entity must hold title to all land parcels, enjoying the rights and fulfilling the duties of ownership. As explained, most other DAOs eventually incorporate as a corporation or foundation. This enables legal action but ties them to a specific state. It is hard to imagine other states recognizing a legal entity in a foreign state as a sovereign state itself. With that logic, McDonald's could become a state since it owns real estate around the world. The alternative is having various individuals hold land on behalf of the DAO. This fragments one large problem into numerous smaller ones. As explained in Chapter 7.3, property rights associated with land ownership

938 Ibid., page 224: "*Rather than buying territory in one place, or trying to negotiate sovereignty up front, you build the community in the cloud and then crowdfund physical real estate on the earth.*"

939 Ibid., page 248: "*Rather than buying territory in one place, or trying to negotiate sovereignty up front, you build the community in the cloud and then crowdfund physical real estate on the earth.*"

940 Author: this refers to regions such as Somaliland, the autonomous region in Somalia that remains unrecognized by any other State or international organization despite having a government and territory.

should not be confused with indisputably owning the land itself. Owning land means owning particular rights to that land. These rights are guaranteed and limited by the states in which the land is situated. The right to use land to found a new state cannot reasonably be considered part of an owner's property rights. In fact, many legal systems will treat such activities as seditious.

In addition to this, the practical issues of smart contracts and DAOs apply equally to the network state. As long as the network state is a DAO, it lacks the requirements to be considered a legal person capable of rights and duties. It cannot own (non-blockchain) property, engage in contracts, sue or be sued, open accounts at banks or exchanges, or shield participants from liability. Once wrapped by a legal person, it cannot become a state. Without a legal framework, what happens online cannot be considered binding in the real world. In addition, the disassociation of code from personality raises questions over the eligibility, duties, and obligations of citizenship and what happens with those whose computer is hacked or access keys are lost.

The network state could benefit from taking a 'law-first' approach, as state recognition appears unrealistic. However, an intermediate step could establish its legitimacy. One option is pursuing recognition as an IO, similar to various IOs, religious orders, and aid agencies that have gained diplomatic status under international law.[941] It would not make it a state, of course, and would require a noble purpose (such as charity). The superior path, however, toward legally organizing groups through technology is a Consensus Jurisdiction.

§ 19.2. Decentralized Arbitration

Most real-world transactions are small: think everyday purchases, small assignments, simple freelance contracts, or license fees for the use of software or video. For many blockchain transactions, there may be no need for the backing of the traditional legal system, as is currently the case. Accessing the conventional legal system can be expensive and cumbersome for a dispute with a small monetary value. Moreover, many legal professionals lack familiarity with this rapidly evolving technological space, which changes by the month.

941 Harroff-Tavel, Marion, "*The Humanitarian Diplomacy of the International Committee of the Red Cross,*" (International Committee of the Red Cross, 2006), accessed on Nov 7, 2024, https://www.icrc.org/sites/default/files/external/doc/en/assets/files/other/humanitarian-diplomacy-icrc.pdf.

For use cases that do not need enforcement in the real world, it could make sense to subject them to fully decentralized arbitration. There are currently various projects working on this idea.[942] The legal framework is structured as follows:

DeLaw projects, as they have become known, generally focus on technology while minimally addressing their governing legal frameworks. All these projects are private initiatives, and they operate at the private law layer within the legal hierarchy. Determining applicable governing laws is as fundamental as a boat builder's need to address buoyancy. Moreover, contract incompleteness guarantees that all variables of a contract cannot be programmed beforehand. As such, fully code-based systems cannot account for the countless ways a contract could be disputed.

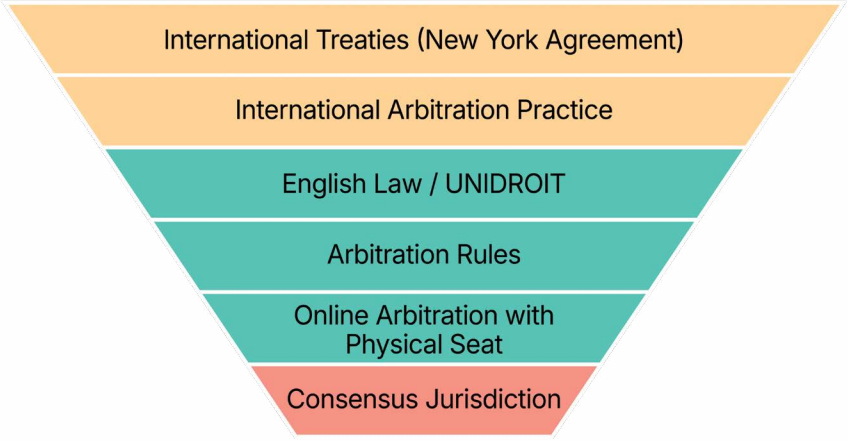
The outcomes of a decentralized system without governing laws will, as a matter of logical necessity, be arbitrary and highly subjective. One decentralized arbitration system boasted that it involved arbitrators from all over the world, giving the inclusive example of an African engineer working on a ruling during his bus commute. This promotion overlooks that certain African arbitrators will hesitate ruling in favor of a woman because their religious/legal framework denies women legal standing unless represented by her husband or a male family member. Furthermore, the old common law demonstrated that case-by-case jurisprudence works well for the adjudication of repetitive local issues but proves inefficient for innovative, complex, and cross-border ones. These projects might benefit from developing law alongside their technology.

Not everybody might feel comfortable with decentralized arbitration without recourse in the non-digital space. Consider a company exporting large amounts of natural gas or transferring highly valued digital assets with complex IP legal frameworks—it requires mechanisms to enforce its rights if problems arise. As argued throughout this book, innovation must come from law as well as technology. Moreover, in the absence of an explicit choice of law by contracting parties, private international law determines the governing jurisdiction. You make a choice, or the choice is made for you.

942 For example: "*Kleros – The justice Protocol,*" (Kleros), accessed on Aug 8, https://kleros.io/, and "*Jur – the decentralised future of governance,*" (Jur), accessed on Aug 8, 2024, https://jur.io/.

As discussed earlier, a legal enforcement framework already exists. Decentralized arbitration processes can easily be integrated into them. Parties could consent to resolve disputes through decentralized arbitration first. If the decentralized arbitration ruling proves insufficient or unenforceable, parties may appeal to an online arbitration court with a physical seat. This would make the contract ultimately enforceable through existing court systems.

The complete legal framework is structured as follows:



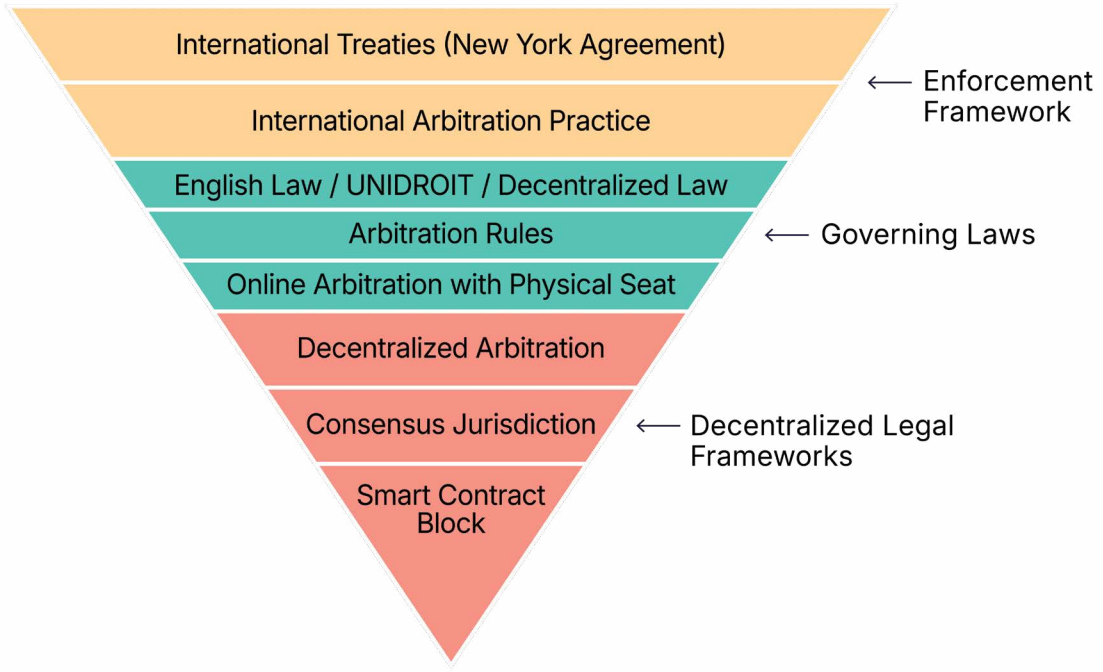
§ 19.3. The Decentralized Legal System

Now the time has come to put all the pieces together. Integrating these elements creates the Decentralized Legal System (DLS), the first framework that merges decentralized technology with existing law.[943] It combines various building blocks into a functioning legal system. It contains multiple layers, starting with decentralized legal projects, a set of governing laws, and, finally, an enforcement framework. A DLS is ultimately a set of rules that parties accept to regulate their interactions. Parties formalize and establish the system by signing a contract under these conditions. Since it is based on the consent of the participants, it functions as a voluntary bottom-up legal system rather than a top-down one.

In the way it is built up, the DLS can be compared to WordPress. In this case, the enforcement layer functions as the open-source framework, jurisdictions and arbitration systems serve as themes, and Smart Contract Blocks operate as plugins. Like WordPress uses the existing infrastructure of the Internet, the DLS can utilize the existing nation-state law enforcement infrastructure. Though the overall structure is similar for each WordPress website, each end product is unique.

943 Author: I first introduced this framework in a Whitepaper in 2018. It can be found here: https://decentralizedlegalsystem.com/whitepaper/, (accessed on Nov 7, 2024).

The complete DLS framework looks as follows:



Decentralized Legal Frameworks (Orange). Decentralized legal frameworks are where technological innovation happens. Development is already underway by various projects on all three elements of this framework. The DLS merely combines them into one working system with a functioning legal framework. By ensuring the backing of the existing legal system, the DLS can be used right away. This way, contracting parties maintain recourse to traditional arbitration courts for legally binding rulings if digital ones are ignored.

> **Smart Contract Blocks.** Smart contracts are an interesting technological development with numerous practical applications. However, to become legally enforceable, smart contracts must merge with human-language (wet code) contracts. As explained in Chapter 7.4, this process currently works best with a straightforward SCB that merges a smart contract with a legal document and subjects the combined engagement to an enforcement framework or a CJ.
>
> **Consensus Jurisdictions.** Participants in a CJ agree to a specific set of rules governing their mutual interactions. These could set general terms and conditions applicable to a specific industry or technology. The standards of the CJ and the SCB together form the binding agreement of the parties. This can be done by making all DAO participants automatic parties to a governing contract (pure CJ) or by having a DAO or institution publish a set of guiding principles that individual contracting parties agree to.

This contract becomes subsequently enforceable through decentralized arbitration and the existing international arbitration framework.

Decentralized Arbitration. Strictly speaking, an arbitration award does not need to be enforced by an existing national legal system. Both parties could accept the ruling as binding or utilize alternative enforcement mechanisms currently under development. As mentioned, decentralized arbitration—without the blue and green layers—is currently being explored by various projects. Decentralized applications could opt to primarily use decentralized dispute resolution, with the possibility to appeal to regular arbitration courts when parties reject or fail to comply with rulings.

Established Governing Laws (Blue). Private law systems rely on arbitration rather than the more well-known national courts with judges and juries. When both parties agree to accept the ruling, a private court should adjudicate the dispute. Such a ruling can be enforced through the New York Agreement, so long as certain requirements are met. One requirement is the use of established arbitration rules and a set of governing laws. This example uses English law, a versatile legal system that has governed international business for centuries. Alternatively, international instruments like UPICC could serve this purpose, as explained in Chapter 13, though they require further development. We might one day be able to rely fully on Decentralized Laws to govern contracts if they ever become 'generally accepted' standards. This idea is explored in the next chapter.

Enforcement Framework (Green). Legal systems are meaningless without teeth. The New York Convention enables enforcement of private law rulings in 172 countries. Chapter 5.2 explained international arbitration enforcement.

The Decentralized Legal System in Practice

The following example demonstrates how this system works for an international transfer of goods:

Bob wishes to buy a shipment of shoes from Alice. Both are participants of a DAO. The DAO sets standards for shipping, payment terms, making and accepting offers, and the use of an escrow account. Both Bob and Alice approve of these standards. After all, they helped create them, and they accepted these standards as legally binding for their interactions. The DAO has thus established a CJ for its participants.

After agreeing on a deal, they select an established Smart Contract Block to govern the transaction. Bob funds the contract, and upon delivery, it releases the funds to Alice. They agree to decentralized

arbitration but include a general arbitration clause for backup resolution if the initial arbitration fails, as the transaction size is substantial. They choose English law as the governing law, and an arbitration court in Singapore—familiar with this DAO and its purpose—obtains jurisdiction over the engagement.

This system proves beneficial and reliable for both Bob and Alice. It allows them to privately arrange their affairs as they see fit while maintaining an existing enforcement framework for when things go wrong. From a legal point of view, a fully decentralized governance layer (orange) oversees the engagement. Existing arbitration frameworks and governing laws (blue) provide guidance and assurance, while the enforcement framework (green) offers recourse in case of disputes.

§ 19.4. Benefits of the DLS

Lack of standardization in business contracts results in inefficiencies. Custom contracts introduce legal, operational, and structural costs, along with complexity. Standardized contracts are more cost-efficient and scalable, especially when developed under an open-source and democratic methodology. Businesses might choose standardized legal frameworks for the same reason 43.5% percent of all websites have chosen WordPress to build their site instead of crafting their own.[944]

Akin to how open-source software standards have influenced many technological areas, CJs can manage the development and publication of contract templates available to everyone. Standardizing smart contracts allows for another level of efficiency gains and ensures compatibility and scalability. Design costs decrease when multiple actors facing similar risks share the development of common solutions. Moreover, this approach could establish expert arbitration courts, reducing legal uncertainty through specialized dispute resolution. Rulings can serve as guiding principles for the broader DLS community and help them perfect the standards even further.

The DLS resembles a software stack, wherein different technologies are 'stacked' upon one another. This layered interpretation aligns it with subsidiarity and helps establish the correct rules at each level. It ensures legal certainty for those who need it while leaving everybody else alone. CJs enable more detailed regulation than centralized systems can ever achieve. Current court decisions affect parties

944 *"Usage statistics and market share of WordPress,"* (W3Techs, Web Technology Surveys), accessed on March 22, 2025, https://w3techs.com/technologies/details/cm-wordpress

beyond the immediate case, with litigants often motivated by both personal benefits and the broader effects of precedent. DLS rulings primarily apply to the specific case, its parties, and those with similar arrangements.

Most people do not know the law. However, allowing ignorance of the law as a defense would result in serious problems for the legal system. The vast volume of modern legislation and court rulings makes comprehensive legal knowledge difficult even for professionals. The DLS enables industry participants to better engage with and understand the law. It is, after all, derived from the everyday interactions of the participants themselves. A community-regulated DLS with clear, voluntarily accepted laws can bring legal clarity to specific areas of human interaction. Moreover, what does not work can easily be removed. This offers flexibility and continuous optimization of the legal frameworks involved. This approach enables the organic development of a legal system where effective legislation and rulings gain prominence through consensus among those who value beneficial and just laws.

A DLS can formalize procedures, standardize terms and conditions of (smart) contracts, incorporate decentralized bills of rights and similar consensus documents, establish decentralized arbitration procedures, and introduce legal context beyond the capabilities of code. Naturally, within this framework, participants customize individual engagements to their needs. Templates cannot fully capture the complexity of a private engagement. Customization remains an option. But what can be standardized are the legal context and procedures and the terms and conditions applicable to a transaction. This system enables like-minded groups to compose fair, transparent rules for self-rule, avoiding reliance on slow, poorly drafted government regulations.

Section I of this book explained that (international) crypto regulations primarily impose restrictions and do not empower this technology. There is a logical reason for this: law can only trail technology. If technological innovations were limited to those permitted by law, then no innovation would be allowed.

The UK Law Commission concludes that, in the UK, digital asset property laws are now relatively certain. Those areas of residual legal uncertainty are highly nuanced and complex. That complexity remains, in part, because both the digital asset markets and the technology that supports them are evolving and will continue to do so. It argues that common law development is better able to keep up with this change than statutory law reform.[945] Moreover, future digital assets are likely to be

945 UK Law Commission, (2023), page 8 & 9. [Author: the authors discussing setting boundaries for a third property category encompassing digital assets. However, setting strict legal classifications may fail to accommodate emerging developments].

complex, composable, and multi-faceted and use innovative technology. This in turn gives rise to diverse products and services that the law will have to accommodate. However, it is an enormous task for the judiciary to remain alive to such technological development. It recommends that the government creates or nominates a panel of industry-specific technical experts, legal practitioners, academics, and judges to provide non-binding guidance on the complex and evolving factual and legal issues relating to digital assets.[946]

The UK Law Commission says, in summary, that it is futile to have top-down standards for such a rapidly developing industry—even judges struggle to keep up. It suggests a bottom-up approach with input from private parties. As discussed throughout this book—and thus supported by the UK Law Commission—the government alone cannot regulate this industry. Stakeholders with technical expertise should be involved in setting the standards.

Where do we start? Section II of this book highlighted various categories of crypto projects that need a better relationship with the law to make wider use possible. Smart contracts require standards to become binding and enforceable. They could benefit from additional standards for signatures and minimum risk requirements, or even simple explanations of exactly what happens on the blockchain. Decentralized arbitration benefits from creating governing principles and procedures. Clear divisions of rights and duties streamline the tokenization process, especially for tokens without a monetary component that fall outside existing regulators' frameworks. Standards for DeFi could help enforceability when smart contracts malfunction and provide accounting guidelines for calculating profits and tax obligations. DAOs could benefit from clear divisions of rights and duties. The DLS provides the framework for all these private and voluntary standards as well as a means to make them law. Plus, its distributed procedures reduce the democratic deficit in law-making.

Can consent form the foundation under a legal system? The short answer: yes. Consent underlies most forms of law discussed in this book: the social contract creating civil laws, treaties establishing international law, individual states establishing the EU by consent, traders developing Lex Mercatoria, contracts forming the financial system, believers' consent establishing the authority of the Catholic Church, accepted open-source standards governing copyright, and athletes' consent governing sports globally. And let us not forget the common law, a bottom-up legal system and one of the leading legal systems in the world. While initial applications of the DLS may be limited to specific blockchain use cases, this technology's true potential is bounded only by imagination.

946 UK Law Commission, (2023), page 23 & 24.

Furthermore, the DLS establishes a new separation of power between lawmakers, voters, and code-based publishers and enforcers. Creation, approval, and publication can be subjected to various restrictions. This can help prevent known problems in law-making, such as the 'tyranny of the majority,' backroom deals, and legislation serving specific interests. This balance of power is what law tries to achieve but seldom does. After all, centralized law reflects a network with a single node—it can easily be corrupted. DeLaw can be extended over various nodes and have its tasks limited by code, as they are in the Bitcoin network. A new paradigm emerges: a world governed by decentralized law!

§ 19.5. Summary and Interpretation

The Decentralized Legal System (DLS) is a complete framework that bridges decentralized technology with traditional legal systems. The system operates through public, open-source processes rather than governmental authority.

The DLS provides solutions for various blockchain applications, including smart contracts, DAOs, DeFi, and tokenization, by establishing clear rights, duties, and enforcement mechanisms.

- The DLS framework consists of three main layers:
    - Enforcement Framework: New York Convention.
    - Established Governing Laws: centralized arbitration and governing laws (English law, the UPICC, or DeLaw).
    - Decentralized Legal Frameworks: Smart Contract Blocks, Consensus Jurisdictions, and decentralized arbitration.

The benefits of DLS law-making are as follows: community-engaged law-making, cost reduction through standardization, specialized dispute resolution, bottom-up self-regulation for rapidly evolving technologies, and an updated separation of power.

- Consensus Jurisdictions (CJs) form a private legal system binding all participants. It can function in two ways:
    - Pure CJ: All participants automatically become parties to a governing contract.
    - Regular Agreement Under Decentralized Standards: Organizations set guiding principles that individual parties incorporate into their contracts.

- CJs help address the contract incompleteness of smart contracts by providing legal context, standardized terms, and overarching principles that guide interpretation and enforcement.
- A Contracting Metaverse turns participation in a Metaverse into a binding agreement.
- The popular, but legally toothless, network state could achieve some legal standing by becoming a CJ.

XX

Decentralized Law

> *"Once we wrapped the globe in endless circles of wires crossing the deserts and beneath the oceans, decentralization was not only possible, but inevitable."*
>
> ~Kevin Kelly

At long last, we arrive at the core of this book: Decentralized Law. This journey took us from an exploration of various sources of law, starting with fully decentralized natural law and moving to international law, which, derived from natural law, contains various decentralized elements. However, we discovered that the modern idea of law-making presupposes centralized authorities as the sole creators of law. As such, significant work is needed to restore the legal system to one based on equal rights and duties. What better way is there than to start building it from the ground up?

This chapter begins by defining Decentralized Law (DeLaw). Next, it suggests ideas for creating DeLaw, drawing from the Bitcoin Improvement Proposal and current DAO technology. Then it examines three possible methods for publishing and accepting DeLaw. Finally, it proposes a Legal Wiki as the ideal technology for publishing and maintaining DeLaw. This system would use a rule-based algorithm to manage amendments and ensure laws remain simple and understandable. The chapter concludes by exploring how DeLaw can assume a more prominent role in society through its introduction into other law layers.

§ 20.1. Definition

On the journey toward DeLaw, we enter unexplored terrain. Before continuing with practical applications, we must establish a clear definition. Since no definition exists, one must be created. Let us first examine both components: 'law' and 'decentralized.'

Definition of 'Law'

For starters, let us stick with the broad definition provided by *The Merriam-Webster Dictionary* mentioned in the introduction. According to it, law is

> *"A binding custom or practice of a community: a rule of conduct or action prescribed or formally recognized as binding or enforced by a controlling authority."*[947]

The key point is that law can be either recognized or enforced. Law does not require enforcement to become law.

Sources of Law

Now that we have a direction, we can narrow the scope. We learned that law has four main sources: natural law, positive (government) law, international law, and private law. We also learned that among these sources, private law uniquely enables the creation of private legal systems. As a result, private parties can organize themselves in CJs with a unique set of custom-made rules. Since this system lacks top-down enforcement, it becomes law only when participants explicitly *recognize* it as binding. DeLaw is a form of voluntary private law.

Definition of 'Decentralized'

The word decentralized, although popular, is rarely defined. The *Cambridge Dictionary* provides the following definition:

> *"To move the control of an organization or government from a single place to several smaller ones."*[948]

According to this definition, decentralization concerns the distribution of 'control.' Moreover, it applies to both government and private organizations.

The Merriam-Webster Dictionary defines decentralization as the following:

> *"The dispersion or distribution of functions and powers; specifically, government: the delegation of power from a central authority to regional and local authorities."*[949]

947 "*law,*" Merriam-Webster, (2019)

948 "*decentralize,*" Merriam-Webster Dictionary, accessed at December 27, 2019, https://dictionary.cambridge.org/dictionary/english/decentralize

949 "*decentralization,*" Merriam-Webster Dictionary, accessed at December 27, 2019, https://www.merriam-webster.com/dictionary/decentralize

This definition appears similar to the first one if one assumes that control and power are synonymous. But are they?

Power vs Control

The first definition solely discusses the distribution of control of an organization or government, not its power. If, for example, the EU restructures and delegates more decision-making control from the European Commission to the parliament, this does not change the overall power of the EU—*just how this power is wielded.*

The second definition discusses the distribution of power rather than control. But when referring to law, can its power be distributed? The general idea of law is that it is above everybody in society—as Thomas Paine said, "the law is king."[950] If the power of law is absolute, the central question becomes who directs these powers. For our definition, we should concern ourselves with 'control over law-making powers.'

Practical Decentralization

The Bitcoin network's decentralization extends beyond organizational or governmental delegation of control. Instead, it creates a system governed by a 'swarm' of independent actors cooperating toward a single goal. Many networks followed with various forms of decentralization. These undertakings provide practical lessons that transcend abstract theory. Buterin observed that three types of decentralization exist:[951]

- Architectural
- Political
- Logical

Architectural Decentralization

Architectural (de)centralization—How many physical computers is a system made up of? How many of those computers can it tolerate breaking down at any single time?

During its first fifteen years, Bitcoin provided ample examples of why a decentralized system cannot rely on a single point of failure. The most famous example is the earlier-discussed Mt Gox. It must be said that, through these ordeals, the Bitcoin

950 Paine, Thomas, "*Common Sense,*" (January 1776): ...let a crown be placed thereon, by which the world may know, that so far as we approve as monarchy, that in America THE LAW IS KING.

951 Buterin, Vitalik, "*The Meaning of Decentralization,*" (Medium, February 6, 2017), accessed on December 27, 2019, https://medium.com/@VitalikButerin/the-meaning-of-decentralization-a0c92b76a274

blockchain *itself* operated as intended. As such, the system proved decentralization results in enormous security and usability benefits for its participants.

Fortunately, posting laws is not the same as providing monetary services. There are no immutable transactions to secure, no double-spending issues to prevent, no regulatory issues to consider, no massive price fluctuations to weather. A law can be a static document. The main function of DeLaw infrastructure will be to document rules and agreements. This concept requires neither a new type of blockchain nor massive technological innovation.

DeLaw development can be done anywhere: an open-source protocol uploaded on a private server, a social media group, or an existing forum. To integrate more advanced features, such as SCBs and CJs, a blockchain is required. In this case, however, an existing blockchain (such as Ethereum) could be used.

Political Decentralization

Political (de)centralization—How many individuals or organizations ultimately control the computers that the system is made up of?

Even a decentralized blockchain, such as Bitcoin, eventually becomes a breeding ground for strife and politics. Actors who invested heavily in mining and trading platforms have incentives to try to influence the project's direction. Luckily, consensus technologies such as proof-of-work and proof-of-stake result in built-in limits on individual actions. These are enforced by code. As a result, politics should have limited influence over sufficiently decentralized networks.

The limitation of politics might differ on certain 'layer-two' projects.[952] We learned that CJs can be formed by any group that wishes to cooperate or organize. Such groups will inventively experience the same political bickering found in all human organizations. However, there could be thousands of groups operating on a few dozen truly decentralized blockchains. Moreover, these systems are voluntary. As a result, anyone can freely leave, join, or build systems with more transparent forms of law creation. Individual DeLaw projects might not be politically decentralized—after all, the entire point is to create law through a political process—however, the overall system is.

There is only one potential political bottleneck. Enforcement of private law in the real-world hinges on the New York Convention or similar instruments. Individual nation-states could withdraw their support for these, though this is an unlikely scenario.

952 Author: 'layer two' means that it is built on top of an existing blockchain.

Logical

Logical (de)centralization—Does the interface and data structures that the system presents and maintains look more like a single monolithic object or an amorphous swarm? One simple heuristic can help answer this: if you cut the system in half, including both providers and users, will both halves continue to fully operate as independent units?

Here, the contradiction becomes apparent. Private law is based on agreement—participants agree to be bound by a certain set of rules. The idea behind an agreement is that it binds people over time, particularly after friendly cooperation has ceased. Once a dispute arises in a private law system, participants cannot retroactively decide that the rules no longer apply to them. Having agreed to specific rights and duties, they must honor the resulting consequences.

Beyond this limitation, participants in, for example, a CJ can still 'fork off' and build their own system. Their updated agreement applies to the new situation and future cooperation. A CJ can be divided in unlimited ways. Ultimately, each variation depends on the consent of the individuals making up the system. There is nothing more decentralized than that.

Definition of Decentralized Law

So far, we have summarized several criteria that together define DeLaw. First, we accepted law in a broad sense. We then saw that only private law allows for practical decentralization. As a result, DeLaw must be recognized by the participants as no central enforcement authority exists. We further learned that not the power of law but the control over it matters. Finally, we learned that DeLaw must be made available on decentralized infrastructure and cannot be controlled through a single political structure.

The definition of Decentralized Law should therefore be as follows:

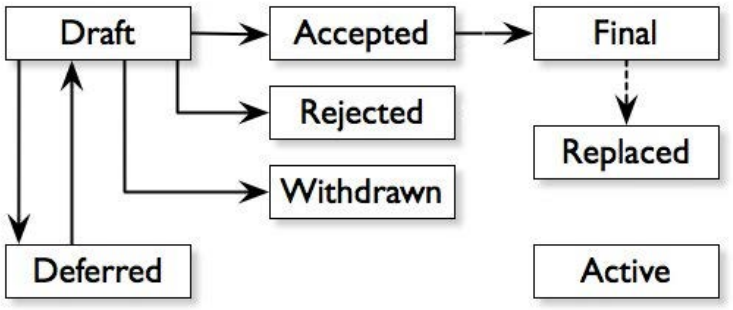
> *A network of voluntarily accepted private law systems whose control is distributed both politically and technologically.*

§ 20.2. Creation

To start creating DeLaw, we must overcome two hurdles. The first is developing a model to bring laws and regulations into existence. Second, we must develop a process to publish and accept these laws. Bitcoin's proven open-source software development practices offer a model for creating decentralized laws as well.

Bitcoin is a fully decentralized system. As a result, no one developer is responsible for its mechanisms. Adjustments to the protocol begin with a developer submitting a Bitcoin Improvement Proposal (BIP).[953] The first step is for members of the network to debate the need for this BIP. Anyone can participate in this open discussion. Meanwhile, developers test and scrutinize the BIP to ensure its security. The initiators try to gain support for their project, which can involve politics and persuasion. The broader community participates throughout this process. At a certain point, the improvement is launched. The network then decides whether to accept or reject the improvement through a voluntary, democratic process: the BIP only becomes effective when enough users accept and adopt it.

This process can be exemplified with the following BIP workflow:[954]



This process has earned Bitcoin the community's respect and trust, enabling its error-free operation and continuous improvement for fifteen years. Can we use this process as a foundation for other aspects of society?

Gitlaw

GitHub is a major tool used for open-source development, including BIPs. This website enables global collaboration among software developers on open-source projects.[955] GitHub runs on Git, a version control system that tracks file changes and coordinates work among multiple contributors. While Git primarily manages source code in software development, it can track changes in any file, including text documents.[956]

Git enables multiple people to cooperate on a single project while tracking all changes. It allows for side projects that can later be merged into the main project.

953 *"Bitcoin / Bips,"* (GitHub), https://github.com/bitcoin/bips

954 *"Bitcoin Improvement Proposals,"* (Bitcoinwiki), accessed May 14, 2018, https://en.bitcoin.it/wiki/Bitcoin_Improvement_Proposal [Author: made small simplifications].

955 "*Github, Build and ship software on a single, collaborative platform,"* (Github), https://github.com/

956 *"Git,"* (Wikipedia), accessed April 19, 2018, https://en.wikipedia.org/wiki/Git

Git further provides complete visibility into the project's history and development process. In addition, forums enable discussions about various aspects of the project.

Given its success in the software community, legislators could adapt this process to create law. Legal experts could collaborate on legislation as they would on an open-source software project. This process would even enable public discussion about the law's goals and content. A particular clause or section of the law could be branched off and discussed separately. After reaching a consensus, contributors could merge the clause back into the main body of law. Such forms of consensus make future acceptance more likely. Of course, developers could design an interface like GitHub specialized for the development of law.

Legal Wiki

The public wiki is a technology that lends itself perfectly to codifying and publishing DeLaw. Wikipedia exemplifies a public wiki. Wikipedia runs on MediaWiki, an open-source software that anyone can employ to publish a wiki.[957]

Wikis suit this purpose well, being both lightweight and user-friendly. The public knows how to use wikis, which excel at hosting and structuring large bodies of text. In addition, wikis enable easy hyperlinking to relevant clauses, rulings, and higher laws. This accessibility surpasses the current system's scattered collection of constitutions, rulings, laws, and amendments.

These wikis could be stored in a decentralized manner using data protocols such as the InterPlanetary File System (IPFS).[958] Voting mechanisms would enable the community to amend and approve this legislation. The result is a law both maintained and stored in a decentralized fashion.

§ 20.3. Publication

Next, DeLaw must become binding. This is achieved by publication and subsequent acceptance. Ideally, acceptance precedes publication. This way, following the BIP process model, only widely supported legislation would become law. Here are three

957 *"MediaWiki,"* (Wikipedia), accessed April 19, 2018, https://en.wikipedia.org/wiki/MediaWiki

958 "*Welcome to the IPFS docs,*" (IPFS), accessed on April 24, 2024, https://docs.ipfs.io/: "*The InterPlanetary File System (IPFS) is a set of composable, peer-to-peer protocols for addressing, routing, and transferring content-addressed data in a decentralized file system. Many popular Web3 projects are built on IPFS - see the ecosystem directory for a list of some of these projects.*"

ideas on how to publish and accept DeLaw: static publication, vote-based systems, and on-chain publication.

1) Static Publication

Law consists of static documents. Unlike cryptocurrencies, these documents do not require continuous transaction verification and security. When the creation of the document is subjected to an open-source development process and acceptance is voluntary, a sufficient level of decentralization can be guaranteed. A simple static publication of DeLaw might therefore suffice.

A respected expert, university, scientific publication, NGO, trade organization, or government institution could publish and maintain such laws. CJs, IOs like UNIDROIT, and industry-specific organizations are likely candidates to set regulatory standards as well. Ethereum or similar blockchains could 'timestamp' these laws and their subsequent versions for verification.

Earlier, this book introduced the Decentralized Bill of Liberties and the Declaration of State Rights and Duties and provided locations on the blockchain where to find them. Those are examples of the static publication of law.

2) Vote Based

A voting process could determine law adoption. Various groups could participate in voting, from industry participants and social groups to CJs and geographical communities. The technology used in DAOs represents the most suitable solution. Due to open-source software interoperability, existing DAOs could easily add this feature. The next chapter introduces the DAA, an innovative type of DAO focused exclusively on law creation and standard-setting, expanding its scope beyond the current financial/entrepreneurial applications.

3) On-Chain

A specific legal blockchain could be launched (likely a 'second-layer' solution). The 'transactions' on this blockchain could be hashes of law publications on a public wiki. Alternatively, this solution allows for the storage of the entire law on-chain.[959] Currently, anyone can make amendments to a public wiki. A blockchain, on the other hand, could protect both publication and amendment procedures in a Legal Wiki. For example, publications could require approval from a specified percentage of participants, while amendments might need approval from four out of five

959 Author: the 'Internet Computer' (ICP) allows the storage of computer programs and data on-chain.

legislators. Multiple projects could compete for the data in the blocks, providing an incentive for network security. Alternatively, an application could be built on top of an existing chain.

§ 20.4. Amendment

Although laws are written with the best intentions, they may become outdated. Technologies and private arrangements change. Laws might need to be adjusted to the latest developments. Some clauses may need rephrasing, while others may become redundant. DeLaw could facilitate this through mathematically restricted amendment processes.

Rule-Based Legal Wiki

Consider a piece of law on a rule-based Legal Wiki containing one thousand words or six thousand characters. Hard-coded rules within the legislation could specify when and how periodic changes occur. A restriction could be placed on the number of characters or words that can be changed. Take, for example, an increase of 10 percent. In this example, the amended law could have a maximum of 1,100 words. In addition, the previously described publication process could govern amendment acceptance.

To amend a legal system, a legislator modifies a law by redrafting clauses and adding new ones. Character limits require clear, concise writing. All proposals must fall within system boundaries. Success depends on clear writing and eliminating the unnecessary words and lengthy sentences and paragraphs that pervade legal texts. This process minimizes other frustrating aspects of legal texts, such as legalese and double negatives. This approach ensures that clauses are selected carefully, kept to their essential meaning, and written in simple words. Such a process creates orderly, accessible, and simple legislation that anyone can understand. It prevents out-of-control legislation. This way, like the Bitcoin Protocol, DeLaw could evolve gradually to maintain relevance.

Changing laws could result in legal uncertainty or confusion. Limiting amendments to annual or five-year intervals could address this issue. Alternatively, the system could either protect core areas from amendments or only allow addendums of a limited size. In any case, the version control in DeLaw allows for easy discovery of which laws were applicable at any specific time and provides a track record of how the laws have changed since.

Incentives for Making and Maintaining DeLaw

In the crypto space, incentive-based systems have proven to lead to the best outcomes in terms of security and usability. A widely accepted piece of legislation could function like online real estate, benefiting and promoting the creators.

CJs could compete for users by offering state-of-the-art laws and procedures. Users could pay a small fee for the use of these systems. In exchange, they enjoy the protection of a tested legal system that is both well-maintained and enforceable. Competition would lead to the establishment of the best systems. It would lead to specialization, as has happened in the Cayman Islands, which now has sophisticated regulation of investment funds.

Those in need of a legal framework could browse various categories similar to searching for a WordPress theme or looking for specific apps in an app store. Marketplaces could develop, with trusted vendors offering well-categorized, star-rated templates for common legal scenarios that are ready to use. CJs could even have their own arbitration courts or associate with arbitrators familiar with their system.

§ 20.5. DeLaw Bridging

A famous example of Lex Mercatoria occurred in England, where merchants at medieval trade fairs developed their own courts and practices to regulate trade. As the English legal system became stronger and more unified, English judges increasingly assumed jurisdiction over disputes among merchants. However, the English judges often lacked sufficient knowledge about specialized businesses to evaluate alternative rules. Instead of making rules, the English judges allegedly sought to discover and selectively enforce existing merchant customs. Thus, the judges dictated conformity to merchant practices, not the practices to which merchants should conform.[960] According to an old principle in jurisprudence, judges cannot make (common) law except when they find a social norm worthy of enforcement by the state. They must extract law from existing practices instead of inventing something altogether new.[961]

960 Cooter, Robert D., "*Decentralized Law for a Complex Economy: the Structural Approach to Adjudicating the New Law Merchant,*" (University of Pennsylvania Law Review, Vol. 144, May 1996, No.5), page 1648.

961 Ibid., page 1649. [Author: the author is referring to common law judges, but civil law judges have even less liberty to adjudicate disputes].

The modern economy creates many specialized business communities, and the various blockchain communities, each with its own approach, are no exception. Members of these communities develop relationships with each other through repeated interactions. Over time, they establish norms to coordinate their dealings. DeLaw provides a way to formalize this process and build and enforce the new law merchant.

The crypto industry could use definitions and standards that operate across its ecosystem. These areas include the characteristics required for legally binding smart contracts; ownership rights in NFT purchases; governing standards for DAOs (including risk and liability division); standards for digital/decentralized IDs authorized to sign contracts (including pseudonyms and hashes as anonymity-enhancing representations); payment formalization in DeFi transactions; e-commerce and freelancing terms and conditions; invoice, tax, and accounting standards; consumer protection standards;[962] definitions surrounding private wallet property rights; and the creation of governing law and uniform law instruments (with option standards for subjecting individual transactions).

Throughout this book, the possibility of formalizing this type of law at both national and international levels was examined. It is not hard to imagine how a set of principles can become part of national legislation. The tools described in the next chapter can even be directly incorporated into the regulatory process, for example, by a municipality setting up a DAA to have citizens draft and make their own laws. Alternatively, citizens could seek judicial enforcement of these laws to establish precedent. DeLaw and its developmental process could establish a fourth branch of government: self-governance.

DeLaw can become, over time, generally accepted on an international, supranational, or regional level as a neutral and balanced customary set of rules. It can even be specifically recognized by treaty. Alternatively, certain standards can become national policies or guidelines for international, supranational, or regional-level institutions.

This idea is not new. Branch organizations often draft regulatory standards for their industries. Take the Securities Market Practice Group, which succeeded in creating globally agreed-upon, harmonized market practices that were integrated with standards from the International Organization for Standardization (ISO).[963]

962 Author: when you know who the seller is, the buyer can remain anonymous. If the delivery of the product does not happen, the buyer can then choose to reveal himself and forward the case to an arbitrage commission.

963 "*About us,*" (Securities Market Practice Group), accessed on March 20, 2025, https://www.smpg.info/about-us

A group of broker/dealers, investment managers, custodian banks, and central securities depositories created standards which, working with regulators, became ISO standards—transforming private standards into international law!

The crypto industry can follow this example. Once a reliable standard emerges, it is a safe and popular bet for governments to incorporate this in their legislation. As far as enforcement goes, judges are supposed to be independent and base their judgment on the law. For them, there should be no difference in how the law is created. They might even feel more comfortable ruling based on widely supported and locally accepted DeLaw than on top-down enforced international standards from Geneva. Over time, arbitration courts may enforce proven tools developed in CJs when adjudicating disputes.

§ 20.6. Summary and interpretation

Decentralized Law (DeLaw) consists of a network of voluntarily accepted private law systems whose control is distributed both politically and technologically.

Key Takeaways:

- DeLaw must be recognized by participants as binding; no central enforcement authority exists.
- The Bitcoin Improvement Proposal process serves as a model for DeLaw creation, featuring open discussion, testing, and voluntary democratic adoption.
- Git's version control system can be adapted to create law collaboratively, allowing legal experts to work on legislation like an open-source software project.
- A Legal Wiki system is ideal for codifying and publishing DeLaw, offering easy hyperlinking, accessibility, and community participation.
- Three methods for publishing and accepting DeLaw are proposed:
    - Static publication by respected institutions with blockchain timestamping.
    - DAO-based voting systems.
    - Dedicated legal blockchain or second-layer solutions.
- Rule-based amendment processes keep DeLaw current while preventing complexity through amendment and character limits.
- DeLaw creators compete for users by offering specialized legal systems and arbitration courts.

- The crypto industry can follow examples like the Securities Market Practice Group in creating regulatory standards that evolve into formal law.
- Evolving standards are needed for smart contracts, NFTs, DAOs, decentralized IDs, DeFi transactions, and other crypto-related legal frameworks.
- DeLaw can bridge into formal legal systems by becoming generally accepted standards that are incorporated into national legislation or international treaties.
- Judges may prefer ruling based on widely supported DeLaw rather than top-down (international) law.

XXI

The Decentralized Autonomous Association

The chapter on decentralized organizations highlighted the various practical and legal problems with DAOs in their current form. The first issue is that they are not a person in the eyes of the law. The second issue is that DAOs often perform regulated or risk-bearing activities. The combination of these two results in the need for participants to protect themselves against liability by wrapping the DAO in a legal entity. This removes the 'D' from the equation and turns a DAO into a centralized organization with innovative decentralized governance. DAOs that wish to remain decentralized enter a regulatory minefield. Established institutions and their legal teams cannot operate under such uncertain legal conditions. This prevents the wider use of beneficial technologies.

The solution to this problem is to create a novel kind of DAO, one not engaged in regulated or risk-bearing activities. To achieve this goal, we need a DAO that does not pretend to be an organization. But when we remove the 'O' from the equation, a DAO is no longer a DAO. So, what is it? I suggest replacing the word 'organization' with 'association.' This would make it a DAA.

Combining the definitions of 'association' from *The Merriam Webster*[964] and *The American Heritage*[965] *Dictionaries* yield the following:

> *"A society of persons who have an interest, activity, or purpose in common."*

This definition makes two things clear: a DAA is a collective of multiple separate persons, and it is a society—not an organization. What does this mean in practice?

964 "*association, noun,*" (Merriam Webster Dictionary), accessed on Aug 19, 2024, https://www.merriam-webster.com/dictionary/association: "*2: an organization of persons having a common interest : society*"

965 "Association," (The American Heritage Dictionary of the English Language, 5th Edition), accessed on Aug 19, 2024, https://www.wordnik.com/words/association: "*An organized body of people who have an interest, activity, or purpose in common; a society.*"

Each *person* in this society maintains independence while using the DAA solely for specific purposes. The strict independence and absence of shared responsibilities eliminate legal complexity and remove the need for a separate legal entity to wrap this association. Because it is not an organization, a DAA cannot perform the functions commonly performed by a DAO (or a corporation). It cannot perform regulated activities, such as raising money, and it cannot engage in risk-bearing activities, such as signing contracts, hiring contractors, or owning a treasury or assets.

So, what can it do? A DAA can create law, code, standards, and technologies. It enables societies of any kind to collaborate on creating and voting for binding standards and shared principles. It makes blockchain collaboration tools available to the rest of society. This opens up the possibility to use powerful tools created by the blockchain community for every kind of human cooperation imaginable. As such, the DAA has the following definition:

> *An association of independent persons who have an interest, activity, or purpose in common that uses blockchain technology to collaborate on creating and voting for binding standards and shared principles.*

From a technological point of view, a DAA is not much different from a DAO. It uses the same technology and the same voting mechanisms. Accordingly, one can issue a governance token to vote for proposals. The tokens themselves will be pure utility tokens without monetary value. However, if one wishes to vote in the DAA, one must pay a gas fee for the use of the network. At the time of writing, the only major missing component is the ability to write, discuss, and publish law in a decentralized manner—a relatively simple feature with existing technology.

Once this technology becomes mainstream, one may even see single organizations using it to engage their stakeholders. Many charities, local governments, and NGOs would likely welcome the ability to use DAA tools. They could help them engage stakeholders, create laws and standards, vote on proposals and policies, and record all decisions in a decentralized and transparent manner. Even in the corporate world, DAA tools could help engage staff, record shareholder decisions, or vote for a new CEO. DAAs can even determine corporate strategy, assigning management a supervisory role. A private organization using DAA tools is itself not decentralized. It would merely use a Blockchain Voting System (BVS) for internal use. A BVS is an interface for traditional organizations to use blockchain governance technologies to engage their stakeholders. The centralized, low-risk nature of such activities could require a specific kind of smart contract, one where a central party has the authority to assign and reassign voting tokens to staff or stakeholders. One could even think about having a locally run blockchain to ensure privacy.

The difference between the DAO, DAA, and BVS is as follows:

	DAO	DAA	BVS
Description	Organization	Association of equals	Single organization engaging stakeholders
Vote on proposals	✓	✓	✓
Create law	Possibly	✓	Possibly
Create binding standards	Possibly	✓	✓
Decentralized	Possibly	✓	×
Raise money	✓	×	×
Engage in contract	✓	×	×
Hold assets/treasury	✓	×	×
Determine policy	✓	×	✓

Any blockchain adding this functionality could bring a massive amount of (non-financial) use cases to its ecosystem. The benefits of non-financial use cases extend beyond significant demand for tokens to pay gas fees. They add a level of professionalism and decentralization to a chain that is impossible to ignore. A blockchain that acts as infrastructure for shareholder votes, NGO democracies, and local government law-making has little chance of being scrutinized by judges or regulators. Judges and legislators must consider the consequences of their actions, and they will be reluctant to shut down crucial, widely used infrastructure that people depend on for governance (instead of rampant speculation).

> *Bob and Alice are representatives of two major trade organizations. Due to ongoing geopolitical uncertainty, their members face a tremendous increase in legal costs. They wonder if there is a way for them to create industry standards that can help standardize the ongoing contracting work. Alice decides to form a DAA and issue governance tokens for her and Bob. She invites fellow representatives Carol and Dan. Next, Alice proposes the first versions of the legislation on GitHub. Bob and Dan like the idea. Carol points out several potential problems with the current version based on recent industry developments. Bob, Dan, and Carol all agree that these are necessary additions. Alice is not convinced, but a vote done with an internal BVS in her organization demonstrates that her stakeholders overwhelmingly agree with the latest proposal. As such, everyone agrees. The vote is cast, the new standards are approved, and the results are recorded as v1 on the blockchain. The group agrees that any version update requires 75 percent of the vote and limits annual character increases to 10 percent to prevent excess regulation. This process catches the eye of various legislators, who incorporate the standards into a widely recognized binding treaty.*

§ 21.1. The DAA: Evolving Governance

Companies and governments are fictional legal personas that serve as a layer of abstraction created by humans for managing collective affairs. Since they are not physical beings, they operate according to specific principles, such as law and accounting.[966] Accounting measures the health of an organization through simple arithmetic: income minus expenses, resulting in either a surplus or deficit. When in a deficit, an organization risks defaulting on its obligations. When in a surplus, the organization makes a profit or builds a reserve. Consequently, most forms of human organization depend on both laws (which set goals and divide rights and duties) and accounting (which determines the organization's health and policy feasibility).

All laws overseeing organizations are geared toward this reality and set various standards and mandates around the use of money. Examples are accounting standards, tax obligations, and measures to prevent loss of funds by signatories. It is sometimes argued that 'non-profits' operate under a different, more noble set of rules. The truth is they operate under the same principles. In fact, non-profits often face higher scrutiny because society grants them specific benefits, such as tax exemptions. Consequently, non-profits must follow numerous regulations to ensure money is well-spent, such as instituting mandatory positions like treasurer and submitting plans for approval.[967] In short, fictional legal organizations are all about money. Once money management is involved, legal complexity inevitably follows.

DAOs attempt to resolve this legal complexity through decentralization, but this approach only makes matters more complex. Furthermore, they build on the wrong premise: that all forms of human organization should become startups of dubious legality whose goals can be reduced to financial outcomes. No declaration of independence or constitution ever came by a group of founding fathers first raising money for a startup. DAOs work great for certain projects or for governing large, decentralized networks mainly regulated by code (we need only so many of those). The DAO model is unsuitable for everyday use cases. The growth of DAO

966 Author: one could argue that organizations have a moral persona, in addition to a legal persona. But it is exactly the focus on morality and idealism that often results in ignoring basic rights and duties associated with being a legal person.

967 Charities Act (Chapter 37, Section 48), Charities (Registration of Charities) Regulations, Rg 10, G.N. No. S 178/2007, EDITION REVISED 2008, (2nd June 2008), Singapore, https://sso.agc.gov.sg/SL/CA1994-RG10?DocDate=20230113, [Author: I use the charity registration requirements in Singapore as a example. It mandates hiring at least two local citizens of permanent residents on the board 3(1)(a), requirements that at least part of the funding benefit the Singaporean community 3(1)(b), and requirements for documents detailing the funds disbursement plan4(1)(b)].

use beyond limited use cases has never materialized, primarily because their focus on money management inevitably attracts the law.

This is where the DAA comes in: it allows for organizational outcomes (the creation of law, code, or anything else) without enslavement to numerical metrics. It might serve as a bridge between many forms of popular organization and law creation by removing monetary components and the risks of an unclear legal personality. The DAA concept focuses on processes in human organizations that are not startups or money-dominated. This offers extensive practical applications: local governments connecting with voters, NGOs involving stakeholders, corporations engaging staff or shareholders, clubs involving members, sports teams interacting with fans, and trade organizations establishing standards (for example, ISO standards). The technology can be simple and, once open-sourced, adjusted to specific use cases. Security can be provided by existing 'layer-one' blockchains, as these applications seem more likely to be a layer-two solution built 'on top' of existing infrastructure.

The incentive structure is simple: users pay for the service and use of the network as they would any other (such as website hosting). The lack of incentives makes these systems less interesting for scammers and get-rich-quick ploys. Incentive schemes catch the eye of regulators, thereby contradicting decentralization. Additionally, the absence of incentives might be beneficial in certain situations, as it allows for other considerations, such as justice, legal equality, and separation of power. However, one does not even need to involve lofty principles—DAAs can facilitate any situation where people need independent standards or an immutable record of collective decisions.

§ 21.2. Summary and Interpretation

The Decentralized Autonomous Association (DAA) is a form of DAO that does not perform regulated activities like raising funds from the public or risk-bearing activities such as signing contracts, hiring contractors, or managing treasuries.

Key Takeaways:

- Organizations like companies and governments are legal fictions created to manage collective affairs, operating through laws and financial principles. DAOs focus on financial principles, DAAs solely on laws.
- DAO advocates incorrectly assume all forms of human organization should function like financially driven startups of dubious legality.
- The DAO model works well for specific use cases like governing decentralized networks but is unsuitable for most everyday organizational needs.

- DAAs primarily focus on creating law by enabling collective collaboration on binding standards and shared principles.
- DAAs maintain member independence while enabling cooperation for specific purposes, avoiding shared responsibilities.
- DAAs use the same technology and infrastructure as DAOs, employing utility tokens without monetary value for voting purposes.
- Potential users include charities, local governments, NGOs, and corporations for activities like shareholder voting and strategy determination.
- Individual organizations could use DAA tools to create a Blockchain Voting System (BVS) to engage staff and shareholders, create laws and standards, vote on proposals, and record decisions transparently.
- Blockchains supporting DAA functionality could attract significant non-financial use cases and gain legitimacy through institutional adoption and infrastructure importance.

XXII

How to Decentralize the Law

> *"The people must fight in defence of the law as they would for their city wall."*
>
> ~Diogenes Laertius

This book has laid out the legal framework of Decentralized Law. Now we must piece everything together. A typical reaction in fin-tech would be "Let's build it!" And luckily, these ideas are relatively easy to build. After all, this is a legal innovation, not a technical one. Publishing static texts is easier than building decentralized financial products. Moreover, the tools discussed in this book can be built on top of the available blockchain infrastructure. Building the technological foundation will initiate the decentralization of the world's legal systems. The legal industry is ripe for disruption. Developments here have the potential to revolutionize how the world operates. Any network, industry, community, or government can incorporate these tools in ways they see fit. Best practices will organically develop and determine the standards of the future!

However, we need more than code. The task that lies ahead of us demands the restoration of liberty and the concept of self-regulation. As explained, existing international legal frameworks are moving in the opposite direction. If we wish to have a peer-to-peer economy and substantial cross-border cooperation under private law, we need to address existing governance layers as well.

§ 22.1. Three Pillars

Consequently, work needs to be done in three areas to make 'DeLaw' a reality. First, the technologies need to be built—this can start right away. Second, enforcement frameworks need to be streamlined with courts to truly empower these technologies. Third, we need to rein in the out-of-control international law enforcement agencies

chipping away at financial liberty. The future of peer-to-peer finance as well as DeLaw rests on all three of these pillars.

Pillar 1: Decentralized Law Technology

Legal applications, exploring novel ways to merge blockchain with code and arbitration methods, continue to advance. However, the focus of this book is the creation of decentralized laws and standards. From a technological perspective, law exists as a static document containing text. Compared to global decentralized payment networks, this is not difficult to create. This is more a change of mindset than an engineering challenge. The technologies already exist and simply need to be put together. Still, work needs to be done—across multiple chains—to make it a reality.

The chapter on the Decentralized Legal System explained the various parts needed to create a functioning legal system. In summary, this would be a SCB to merge law and code, a set of governing standards, and an integration with enforcement frameworks. The main innovation would be the creation of a CJ. However, this could be as simple as adding one feature to existing DAO technology: a way to vote on text and publish this in a decentralized manner. In fact, DAOs are perfectly suited for creating CJs and standard-setting organizations. Conceptually, the DAO needs to change into a DAA to achieve wider adoption.

Pillar 2: Law Empowerment

Once the tools have been built, knowledgeable arbitrators must be recruited and arbitration courts enrolled to give this system teeth. This will take time to fully realize. However, the first steps can be made today because most frameworks are in place. Additionally, work needs to be done on relating blockchain technology to governing laws, private international law, and the integration of private law-making into public policy.

Private Court Systems

The chapter on arbitration explained that private arbitration courts already exist that offer fast and enforceable rulings. Arbitration courts often operate from an incentive structure. It should therefore not be hard to convince one to extend their business into a potentially massive market. Arbitration courts could distinguish themselves as knowledge centers where expert arbitrators provide fair rulings. When arbitrators compete based on merit, business flows to those who combine technical know-how with a proven record of serving their clients and the overall community. Given the specific knowledge required for understanding the complex

dynamic between technology and law, one expects unique knowledge centers to develop around the world—as happened in sports arbitration. In turn, such centers could attract the industry to participate in the drafting of the procedures through CJs and establish the dynamics for the creation of DAAs and other decentralized legal applications. The establishment of an arbitration court brings more to a jurisdiction than the hearing of cases. It could create an entire ecosystem similar to Crypto Valley in Switzerland.[968]

Additional work can be done to integrate existing decentralized arbitration projects in two ways. First, they can apply the tools discussed in this book to create DeLaw for their projects. Next, they can be integrated with DLS and DAA technology and the above-mentioned court system to create the staggered system explained before. This system allows people to obtain a decentralized ruling first and appeal to the enforceable arbitration system second. This system can even be preceded by a (voluntary) round of reconciliation, where the parties explain their positions to each other, and possibly the wider community, to discuss what went wrong and how things can be brought back to an acceptable state for both parties.

Still, there is work to be done on (international) governing laws to ensure that future SCBs, DAAs, and CJs fulfill all the requirements to result in binding regulations.

(Private) Governing Laws

Certain international law frameworks exist to facilitate international commerce—these frameworks could be applied to crypto as well. Examples of such legal frameworks are UNCITRAL and UPICC, of which the latter is the more likely candidate for reasons discussed earlier. However, the UNIDROIT principles face at least four primary compatibility issues with blockchain that need to be addressed: (1) it defines payments as being made by traditional financial intermediaries, (2) it presupposes payments in local currency, (3) its definition of contracts needs to be aligned with blockchain technology, and (4) its termination rights and conditional rights structures need to be reconciled with smart contract coding limitations (or the other way around).

A lengthy, reflexive process will likely be needed where programmers and legislators engage in dialogue to create standards useful for a wide array of stakeholders. Establishing standards that can be elevated to the international law layer will take

968 *"Crypto Valley – Switzerland's leading blockchain & crypto ecosystem. Fostering growth, collaboration and integrity in the global blockchain economy since 2017,"* (Crypto Valley Association), accessed on Nov 11. 2024, https://cryptovalley.swiss/

effort. This makes private law prime for a DAA or CJ to establish these standards first and integrate them into a governing law second.

As mentioned, existing legal systems—such as the English one—are perfectly adapted to innovative private arrangements. Those could be used *today*. Still, for all stakeholders to understand a new legal system, guidance needs to be written and precedence set. The way needs to be paved with test cases, trial and error, and perhaps even institutional or statutory guidance.

Decentralized Law Bridging

It would not be unlikely for an individual jurisdiction, wanting to facilitate blockchain technology, to incorporate widely accepted decentralized standards into their own legislation. This would be an example of bridging: the process of a jurisdiction or an official institution incorporating DeLaw. Areas of law where this kind of integration of privately developed standards is common are commercial contracts, international trade, technology, and finance.

Another example of DeLaw integration would be a legislative body incorporating DeLaw tools, such as a DAA, to help them discover broadly accepted legislation. By engaging stakeholders directly in the legislative process, they discover fair and balanced legislation, uncompromised by special interests. By using these tools, one could see citizens obtain law-making influence in areas that are themselves typically delegated to the state, such as criminal, family, and environmental law, as well as in local policies, such as zoning law and budgeting.

A third way to integrate DeLaw is through judicial acceptance in rulings. Again, once decentralized standards are created, there are ways for them to become governing laws.

A fourth way is to forget integration and create a separate legal system. There is nothing wrong with the existence of more than one legal system governing the same population. According to Fuller, such multiple systems do exist and have in history been more common than unitary systems.[969]

Pillar 3: Financial Liberty Versus International Law

Parallel to building the tools for law empowerment, we have to consider the current direction of law in general and financial regulation in particular. The current push is to have all electronic payments done through regulated intermediaries. There are myriad legal problems with this approach, along with transgressions against

969 Fuller (1969), page 123

individual liberty and principles of good governance. Defending our rights against this onslaught requires political actions at the level of the nation-state and above. The Declaration of State Rights and Duties offers guidance in this regard.

Publishing a book does not change the international legal order. But as French philosopher and sociologist Auguste Compte (1798–1857) explained, the reforms of society must be made in a determined order: first one has to change ideas, then morals (les moeurs), and only then institutions.[970] The direction this system is currently heading can lead to nothing but ongoing legal controversy. Distributing these ideas and having these technologies developed and tested provides a viable alternative. Special emphasis should be given to private property rights and to free exchange without intermediaries, as noted in Art. 6 of the Decentralized Bill of Liberties. In addition, Freedom of the Nodes, the free use of decentralized peer-to-peer networks, must be protected at all costs.

Ideally, such standards would become formalized in a treaty. Materializing these ideas will require lobbying for updated international standards and public awareness campaigns about how the current system operates and can be improved. However, with the aspiration for financial liberty comes a duty to the industry. To satisfy the criteria of Freedom of the Nodes, ongoing work must ensure both solid peer-to-peer decentralized networks and payment infrastructure, as well as the technical ability for individual consumers to safely interact with the network. Considering the latter, one can think of privacy enhancement, safe storage of crypto assets, the infrastructure for cheap and instant transactions, and fail-proof swaps and other forms of DeFi for all fully on-chain and native assets. Once it becomes abundantly clear that consumers do not need to be protected from these technologies, regulators have no more ground to mandate the use of intermediaries; after all, no counterparty risk is better than regulated counterparty risk.

Demanding Subsidiarity

Next to freedom of exchange, the concept of subsidiarity demands central attention. Society must embrace this concept and reestablish who has the authority to regulate what. We begin by regulating our private affairs ourselves and rely on DeLaw when such affairs cross borders. Local authorities should govern local matters and the state those of national concern. International law should refocus on facilitating the peaceful division of rights and duties of equal nation-states as the legitimate expression of peoples' general will in a multi-polar world.

970 "*Auguste Compte,*" (Stanford Encyclopedia of Philosophy, First published Wed Oct 1, 2008; substantive revision Jan 27, 2022), accessed on Jan 6, 2024, https://plato.stanford.edu/entries/comte/index.html.

DeLaw offers a further way to divide powers in addition to the separation of powers as established by Montesquieu. There, three parties divided the absolute authority of the state over its citizens. DeLaw can help divide control over law-making between the state and citizens through republican principles, using democratically created and voluntarily accepted standards that are represented in immutable code. Considering the separation of money and state brought about by cryptocurrencies, we are potentially looking at a future separation of state and (some) law, replaced by renewed liberty and frictionless global cooperation made possible by technology. DeLaw can be influential in this area, both by facilitating rights and duties separately from nation-states and by allowing citizens a tool to influence the laws that govern their lives. The Decentralized Bill of State Rights and Duties might prove helpful for this.

If we were ever to achieve subsidiarity, what would we do with all those self-proclaimed elites who have turned international law into the back door with which they achieve their aims? A salient lesson comes from ancient Rome. When Caesar replaced the republican legal processes with simple one-man edicts, the elite whose power he took away conspired against him and ended his life. Augustus was wiser and kept the most prestigious positions, such as the Senate, to serve as a release valve for the ambitions of the ancient nobility and nouveau riche—while reducing their power to a more ceremonial role. Even a world with decentralized money and law provides ample opportunity for international law coordination on a whole range of topics, especially since cross-border cooperation is likely to keep increasing with the current trajectory. DeLaw itself opens up an entire field of operation for those with international ambition: to create legal standards and offer them to the world. Soon, the voluntary acceptance by the industry at large could become a standard by which international lawyers get measured!

Claiming Decentralized Liberties

The final on the list of things that can be worked on is the wider adoption of the Decentralized Bill of Liberties. It might seem redundant for those who have working constitutions that enforce a bill of rights or in countries that adhere to international law. Regardless, to now have a list that is created for the people to apply as they see fit might be a welcome boost for those whose rights currently are not sufficiently protected. To accomplish this, translations must be made in the various languages of the world, and those interested might need guidance in integrating them into their private arrangements, and possibly in public policy. This opens up a new paradigm for anyone who is looking to improve liberty in the world.

§ 22.2. Summary and Interpretation

Building technology alone is no longer enough. To make Decentralized Law (and a decentralized economy) a reality, work needs to be done on three pillars:

Pillar 1: DeLaw Technology

- The technology needs to be finalized to create SCBs, CJs, DAAs, DeLaw, and the DLS.

Pillar 2: Law Empowerment

- For enforcement, specialized private arbitration courts must be established (or existing ones integrated).
- International governing laws need updating to accommodate blockchain.
- UNIDROIT principles are a candidate but need adaptation for blockchain compatibility.
- Attempts must be made to integrate decentralized standards into legislation.
- Courts can integrate DeLaw through judicial acceptance.

Pillar 3: Financial Liberty vs International Regulation

- The Decentralized Bill of Liberties must be widely recognized to boost liberty globally.
- Rights to private property and free exchange must specifically be protected.
- Freedom of the Nodes (free use of decentralized networks) must be preserved.
- Subsidiarity must be re-established in governance with the Bill of State Rights and Duties.

When all these steps are taken, when governing laws are restricted to preserve liberty, when international law enforcement frameworks empower blockchain technology, and when all the private law-making tools are available, the world will be ready for the next stage of integration. A world of voluntary, cross-border cooperation under private standards.

XXIII

Summary and Interpretation Section III, Decentralized Law

The future of decentralized technology demands a new approach to law. A new legal system needs to be built to support this technology, with equal liberty for all and balanced rights and duties at its foundation. It must recognize both fixed 'constitutional' laws and allow variable law-making for societal evolution. Like Bitcoin, which has both fixed and changeable parts, legal systems need permanent rules to protect basic rights plus flexible laws that can adapt to change. Finally, subsidiarity must return to ensure governance occurs at the most appropriate level, from the individual to the international sphere.

Three major legal hurdles stand in the way of the peer-to-peer economy. First is positivist fundamentalism; modern lawmakers focus on forcing duties to achieve utopia instead of protecting natural rights. This approach must be reversed. Second is international subversion of the legal system, where international entities now create laws outside democratic processes, bypassing traditional safeguards and collective free will. Third is regulatory incompatibility; international regulators treat peer-to-peer technologies as existing financial institutions. This has two consequences. First, the right to peer-to-peer transactions needs to be cemented in existing governance layers because it is facing erosion. New legal instruments need to be designed to address the lack of subsidiarity at both the national and international levels. Moreover, since existing lawmakers show no interest in enabling the peer-to-peer economy, new empowering legislation must emerge from grassroots initiatives. A system to facilitate this bottom-up law-making must be designed as well.

To start, a new legal foundation is needed, separate from the national and international legal framework currently eroding our liberty. Just as the U.S. Bill of Rights lives in Americans' hearts and minds independent of politics, blockchain technology enables the creation of similar immutable and universal legal standards that exist independently of any jurisdiction. The Decentralized Bill of Liberties

(DBoL) introduces such basic protections for the twenty-first century. It focuses on negative rights that shield from interference rather than positive rights requiring unequal duties, as these cannot be enforced through decentralized technology. It merges immutable legal principles with immutable technology.

International organizations have gained too much influence. The Decentralized Declaration of State Rights and Duties (DoSR) addresses this power imbalance. It establishes clear boundaries between appropriate international regulation and domestic affairs, promoting true subsidiarity in governance rather than unlimited expansion of international authority.

Freedom of the Nodes (FotN) applies the historically and widely accepted concept of Freedom of the Seas to decentralized networks. Just as no single authority could claim jurisdiction over the oceans, decentralized technologies serving humanity should remain free from restrictive control by any single authority. This principle protects peer-to-peer transactions over all qualifying decentralized networks containing native assets, open-source governance, sufficient decentralization, and universal accessibility.

Legal empowerment for blockchain technology comes together in the Decentralized Legal System (DLS), which connects it to traditional law. This system enables the creation of private, bottom-up, voluntary laws that courts worldwide can enforce through existing frameworks. Smart Contract Blocks (SCBs) merge code with the contract, creating a practical bridge between blockchain technology and law.

Consensus Jurisdiction (CJ) offers a revolutionary way to make law through consent rather than authority. This can occur either through participants being ‘bound parties’ to governing contracts or through the voluntary adoption of standards created by trusted institutions. This approach reduces costs, creates standardization, and provides essential legal context to blockchain technologies.

Decentralized Law (DeLaw) emerges from these elements: a network of voluntarily accepted private law systems whose control is distributed both politically and technologically. Creation occurs through collaborative development, while publication options range from static documents to on-chain solutions. Rule-based Legal Wikis govern amendments, ensuring laws remain clear and manageable while enabling the necessary evolution of the law.

The Decentralized Autonomous Association (DAA) transforms the DAO concept by focusing on cooperation and standard-setting rather than engaging in financial activities. DAAs enable any group to use blockchain governance tools to work together by avoiding the legal complexity that plagues normal DAOs.

Making this vision a reality requires work in three areas: building the technology to facilitate decentralized law-making (SCB, DAA, CJ), merging these systems with courts and laws that can enforce them (DLS, DeLaw), and protecting financial liberty from excessive regulation (DBoL, DoSR, FotN). Each area supports the others in creating a working system.

The goal is a new form of globalization based on code-regulated financial systems, states limited by decentralized liberty, international governance limited by state liberty, and international cooperation focused on consensual private law through decentralized networks.

List of Startup Ideas

For those inspired by making Decentralized Law a reality, the following list of startup ideas might prove helpful.

- **Smart Contract Block**: become a respected drafter of widely used legal templates.
- **Consensus Jurisdiction**: apply this technology to any existing DAO technology to dramatically expand their use cases.
- **Contracting Metaverse**: create a Metaverse for business meetings where all that is agreed upon is recorded and stored as a binding agreement.
- **Consensus State**: help the legally toothless network state gain legal recognition.
- **Decentralized Autonomous Association:** transform DAO tools to offer blockchain-based voting and standard-setting to every company or institution around the world.
- **Decentralized Law**: become the chief legislator for your industry and set the standards of the future. Available to any foundation, NGO, DAO, corporation, or ambitious individual.
- **Gitlaw**: apply Git to law-making by coordinating and working together.
- **Decentralized Legal System**: build your own private legal system and invite the world.
- **Marketplace Disintermediation**: Amazon, Upwork, and eBay all facilitate transactions. Part of this work, such as the setting of terms and conditions, can be done by a CJ, and the contracts can be SCBs. Opportunities for disruption are endless...
- **Specialized Arbitration Courts**: existing or new courts could focus on specific projects or technologies.

- **Enforcement Agency**: the New York Convention is well-established law. In practice, service agents might need to help claimants to get rulings enforced.
- **Credit Unions**: an asset-based monetary system still benefits from the provision of credit. Traditional fractional reserve banking struggles to function in the 24/7 crypto economy. A modern credit union could serve as an alternative credit provider. Financial regulations complicate the path to full decentralization, but these institutions are most effective when operating regionally and when funding productive purposes anyway.
- **Monetary Law**: a monetary system's transformation from liability-based transactions to property rights transfers will require intimidating amounts of legal and contractual redrafting.
- **Education**: this emerging industry requires legal advisors to possess specialized knowledge, particularly an understanding of cross-border legal issues and technology. These evolving legal demands necessitate changes in legal education.
- **DAO Participation Entity**: to protect participants from both liability and excessive taxation arising from DAO participation, a specialized legal entity or service could be created.
- **International Standards**: work has to be done on conventions/treaties where native tokens are confirmed as an intangible asset, as IP is confirmed by the Berne Convention.

Join, Shape the Future of Law!

> *"Get busy with life's purpose, toss aside empty hopes, get active in your own rescue—if you care for yourself at all—and do it while you can. The purpose of all our reading and studying is to aid us in the pursuit of the good life. At some point, we must put our books aside and take action."*
>
> ~Marcus Aurelius

At the time of publishing, we stand at a pivotal crossroads for decentralized technology. The crypto industry continues its collision with regulatory frameworks, while innovation remains confined to a small community of tech enthusiasts due to the absence of comprehensive legal structures. To transform this landscape, we need coordinated action across three essential pillars. First, creating robust decentralized law technologies such as the DAA. Second, building effective bridges between (decentralized) legal applications and existing arbitration courts and legal frameworks. Third, raising political awareness for the need for new legal principles such as the Decentralized Bill of Liberties, Declaration of State Rights and Duties, and Freedom of the Nodes.

Take action by joining the growing Decentralized Law community. Follow me on X (@Decentral_Law) or Telegram (t.me/Decentralized_Law) and participate in thoughtful discussions on the Discord server. These platforms provide opportunities to engage in meaningful debate and help spread awareness about the potential of decentralized law.

For those seeking deeper engagement, check out the website at decentralizedlaw.org and subscribe to the newsletter for updates. You can contribute your technical expertise directly to open-source projects on GitHub (github.com/decentralized-law).

The blog DecentralizedLegalSystem.com offers in-depth analysis and thought leadership on crypto regulations, the Decentralized Legal System, and other relevant topics.

Join me as we build a more equitable and just legal future for everyone!

Afterword

On June 15, 1215, in a boggy field in medieval England, banners waved and drums rolled. Against his wishes, King John made peace with his rebellious barons. The king, up until then, held tremendous power and, although bound by customs, did not abide by them. This time he was, reluctantly, forced to make concessions, which were recorded in the Magna Carta. It was a revolutionary document in the history of Europe. It guaranteed liberty and subjected all, including the king, to the rule of law. The most lasting clause protected all free men from arrest and imprisonment except by the lawful judgment of their peers or by the law of the land.[971]

For the first time in ages, a European ruler faced restrictions on his power in the form of a written law. Over time, more and more concessions had to be made. Power flowed from king to barons, from king and barons to Parliament, and from all three to the individual. At times, a king clawed back lost powers. But over time his influence waned, and his role was reduced to a ceremonial one. One can view the modern decentralization movement in the same light. The new generation steadily withdraws its consent from the centralized debt-based money system in favor of a decentralized asset-based one. Why not extend this silent revolution to the legal system? To law itself?

An alternative form of globalization emerges: a financial system regulated by code and protected by law. States are limited by decentralized liberty, the international legal order limited by state liberty, and international cooperation focused primarily on consensual private law. When the general law follows such principles, and the specific law is based on voluntary cooperation, then, overall, it becomes hard to pass laws to anyone's detriment.

By starting to decentralize the core functions of society, the world has ventured down an unknown path. One that presupposes people taking stewardship over their fates. The road ahead will be bumpy and faced with pitfalls. But the crypto

971 Stenton, Doris Mary, "*Magna Carta, England [2015],*" (Encyclopedia Britannica, April 19, 2024), accessed on May 9, 2024, https://www.britannica.com/topic/Magna-Carta

industry has more people working selflessly on building open-source technology in service of humanity than Wall Street and the City of London have combined. This is a young, ambitious, and smart army of people on a collective quest for empowerment and real utility. Betting against this system is unwise.

However, the law must be considered. The legal system is currently seen as a tool for advancing agendas. This mindset will not change overnight. By the same token, Decentralized Law is not an all-encompassing alternative that solves all society's problems. It cannot replace all institutions. It certainly cannot eliminate all unfairness and inequalities existing between people. Its power lies in technology's ability to enforce true equality among participants. In the end, equal natural rights and duties are a foundation worth defending—the only proven foundation for peace, harmony, and justice. The end goal: everybody equal in code and law!

The best laws are found, not made. An unaccountable, unelected, and out-of-touch managerial class seeking control over national governments under a permanent state of emergency is not a good foundation for law. Instead, let us focus on liberty for all, and let the people organize themselves as they see fit. Why fear this? Why fear liberty? Using technology, organic and widely supported global standards can now emerge from the bottom up. By letting go of the desire to control and introducing a little freedom and wonder in our lives, society can take its next big step toward a decentralized future.

We stand at the beginning of a new, exciting, and wonderful cycle in human organization. The ideal society, created by ideal humans, does not exist. That good, neutral laws are needed to govern a society is something Plato already told us. And so, we are back where we started. Luckily, now with the ability to create bodies of private Decentralized Law based on both fair and ancient principles as well as modern technological consensus. Private laws that unite humanity and carry real-world force. Laws that supplement existing law where it falls short. One day, they might even supplement existing law-making processes.

These developments are only a logical next step in a process that has been going on for millennia. Power has shifted from gods to emperors, from emperors to kings, and from kings to barons, parliaments, and ultimately the individual. Now technology has opened the door to the decentralization of the state's power to create money and law. It requires a shift in thinking and will not happen overnight. However, the trend is clear and cannot be stopped. It is inevitable...

Not everybody in the current power structure might welcome this new reality...but neither did King John.

Vires in Numeris!

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The list above contains only the sources that have been cited in this book. In addition, there are dozens of articles, whitepapers, institutional reports, and regulations that I read over the last decade that helped me understand both the crypto industry and the applicable financial regulations. Furthermore, I read various critical works that helped shape my thoughts and put the ideas behind classical liberalism into perspective. Examples include fundamental critiques of liberalism, such as the works of Marx, Spengler, and various conservative authors. Similarly, I read those works popular in the crypto community, such as *The Sovereign Individual* and *The Machinery of Freedom*, among others. Although hypothetical scenarios are interesting, I chose to focus on the legal system as it currently exists.