



THE **BLOCKCHAIN** AND THE  
**NEW ARCHITECTURE**  
OF **TRUST**

KEVIN WERBACH

## Contents

Series' Editor's Introduction ix

Acknowledgments xv

### **Introduction: The Parable of the Tree** 1

Buttonwood to Blockchain 1

Logically Centralized, Organizationally Decentralized 7

Law and Quantum Thought 9

The Path Ahead 11

## **I A Revolution in Nine Pages**

### **1 The Trust Challenge** 17

Without Relying on Trust 17

A Crisis of Trust 18

Defining Trust 21

Trust Architectures: Peer-to-Peer, Leviathan, Intermediary 25

Trustless Trust 28

### **2 Satoshi's Solution** 33

Too Trusted to Fail? 33

In the Beginning, There Was Bitcoin 39

Nakamoto Consensus 42

The Significance of Cryptocurrency 48

### **3 More than Money** 53

It All Started When They Nerfed the Siphon Life Spell 53

Permissioned Ledgers 58

Smart Contracts 63

The DAO Saga 67

—1

—0

—+1

<b>4</b>	<b>Why Blockchain?</b>	<b>71</b>
	Beyond the Whoppercoin	71
	The Enduring Value of Intermediaries	74
	Decentralization	76
	Shared Truth	79
	Translucent Collaboration	83
	Tokens of Value	85
<b>II</b>	<b>Ledgers Meet Law</b>	
<b>5</b>	<b>Unpacking Blockchain Trust</b>	<b>95</b>
	Something from Nothing	95
	Distributed	96
	Cryptoeconomic	98
	Immutable	101
	Transparent	105
	Algorithmic	107
<b>6</b>	<b>What Could Possibly Go Wrong?</b>	<b>113</b>
	Vision and Reality	113
	Satoshi's Error	116
	The Limits of Decentralization	119
	Not-So-Smart Contracts	123
	Trusting the Token Issuers	127
	Centralized Edge Providers	129
	Rules of the Road	131
<b>7</b>	<b>Blockchain Governance</b>	<b>133</b>
	Vili's Paradox	133
	The Power of Consensus	135
	Governing the Governors	138
	The Social Contract	141
	Governance in Practice	143
<b>8</b>	<b>Blockchain As/And Law</b>	<b>149</b>
	Vlad's Conundrum	149
	Things That Cryptoregulate	153
	This Time It's Different?	156
	Ex Ante Design vs. Ex Post Dispute Resolution	160
	Law as a Technology of Trust	163
	Modes of Interaction: Supplements, Complements, Substitutes	165

-1—

0—

+1—

<b>9</b>	<b>We're from the Government, and We're Here to Help</b>	<b>175</b>
	We Need to Begin Somewhere	175
	Regulatory Controversies	178
	The Token Offering Test Case	182
	Regulation and Innovation	189
	A Framework for Regulation	194
<b>III</b>	<b>Building the Decentralized Future</b>	
<b>10</b>	<b>Connecting the Legal and the Technical</b>	<b>203</b>
	The Education of Nicholas Szabo	203
	Making Law More Code-Like	204
	Making Code More Law-Like	212
	Fusions of Cryptogovernance	218
<b>11</b>	<b>An Unpredictable Certainty</b>	<b>225</b>
	As Speculative as They Are Rich	225
	Decentralization Cannot Hold	228
	Overcoming the Trust Trade-off	233
	Blockchain as Spanning Layer	236
<b>12</b>	<b>Conclusion</b>	<b>241</b>
	Mike Hearn's Odyssey	241
	A Matter of Trust	245
	Notes	247
	Index	305