fiduciary law, creating uncertainty and structural incoherence? Can Delaware’s changes have produced indeterminacy while allowing it to continue winning the race for corporate charters? The book’s claims are delicately balanced.

Some doctrinal claims will also face resistance. Many US scholars will see coherence in Delaware fiduciary law, pointing to its practical operation. Some may be confounded by the book’s treatment of the business judgment rule as distinct from the duty of care and the conception of the business judgment rule as “never” having been a “barrier to the application of the duty of care”. These claims are central to the book’s structure, allowing it to consider business judgments and the duty of care separately, creating a neat parallel with UK law where these categories warrant distinct consideration. But so closely linked are the business judgment rule and the duty of care that US scholars generally consider them inseparably: see Clark, *Corporate Law* (1986), pp. 123–24; Bainbridge, *Corporate Law* (3rd ed., 2015), pp. 107–15. The precise relationship is contested, and yet a prevailing view – in tension with the book’s position – is that the application of the business judgment rule insulates directors from liability for breach of the duty of care. Still, the book acknowledges competing perspectives, requiring critics to come to grips with its ideas.

The book contains fewer summative statements of direct comparison between UK and US corporate fiduciary law than one might expect. But its careful analysis sheds light on the common narrative that, in comparison with UK law, US corporate law is more director-friendly, its directors’ duties more lenient. That comparison may reflect how these systems allocate power between boards and shareholders, but whether it also characterises corporate fiduciary law is less clear. I doubt it. Recall that the UK good faith duty and US business judgment rule were “remarkably consistent”, a position that Delaware’s “contortions” would seem not to have significantly altered. The UK duty of care is “substantially congruent” with a core strand of corresponding US case law. The corporate opportunity doctrines had “much in common” until 1970, when UK law shifted, a change Kershaw rejects as against the weight of authority. As for self-dealing law, Kershaw describes how US courts came to require fairness whereas UK courts respected commonly used constitutional provisions that required less – that interested directors inform their fellow directors of self-dealing. As US lawyers know, Delaware courts rarely protect directorial self-dealing on fairness grounds; until relatively recently, the judicial decision to impose fairness review was regarded as “outcome determinative”, so remote was the prospect that defendants could carry their burden of establishing the required procedural and substantive fairness. If we were to extend our analysis from fiduciary law’s substantive content to its enforcement and deterrent effect, claims of US fiduciary law’s greater leniency would look more doubtful still.

This book rewards close reading and re-reading. It deserves a wide audience.

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*Blockchain and the Law* is one of the first books offering a high-level overview of the legal issues raised by blockchain technology, although it is an overview in breadth more than in depth. The book provides a well-written and useful
introduction to the subject for readers unfamiliar with the technology and its legal and policy implications. Those seeking a technical and in-depth legal analysis of blockchain technology, however, will need to look elsewhere.

De Filippi and Wright are well positioned to undertake the challenging task of explaining the legal issues raised by blockchain in lay terms, having researched the topic from much before the bitcoin boom and blockchain hype. The drawback is that the book focuses on the type of blockchains that were most prevalent in the earlier days of the technology (the public, permissionless bitcoin and ethereum blockchains), at the expense of the private, permissioned blockchains that have been an important driver of blockchain activity more recently.

The book starts with an accessible description of how blockchain technology works. Chapters 1 and 2 describe the technology’s core characteristics, such as public-private key cryptography and consensus mechanisms, and explain how it fits into the existing Internet infrastructure. Readers with a general understanding of the technology might have wished that a book on blockchain and law would devote a larger number of pages to the legal analysis of the technology. It takes roughly 60 (out of 210) pages of introductory explanation of the technology before the legal aspects of blockchain are discussed.

Blockchain and the Law does not fall prey to overly optimistic predictions of blockchain’s potential found in many other blockchain books. Potential benefits are systematically followed by a listing of potential drawbacks, emphasising that blockchain is a dual-use technology. De Filippi and Wright also avoid the trap of incorrectly labelling blockchains “tamper-proof”, as others have done, instead using the more accurate term “tamper-resistant”. Blockchain entries can be reversed by a majority of miners (those contributing computing power to the blockchain) in a so-called “51% attack”. Although this may be costly (estimated at over $1.5 billion for the bitcoin protocol mid-2017, according to one source cited in the book), it is not impossible.

The authors state in the first few pages that blockchains “are not centrally maintained”. This is a convenient way to explain the difference between blockchain and traditional databases and is certainly true for the earlier blockchain initiatives, such as the bitcoin or ethereum blockchains. By now, however, blockchains come in many different types and shapes, including ones operated by private institutions much like centrally controlled databases. The difficulty of writing a book on blockchain is that it risks being outdated almost as soon as it rolls off the printers, as the technology develops rapidly.

At times the need for simplicity and readability is traded off against technical accuracy or nuance, which may well be a sound choice for the technical explanation, but not necessarily for the legal analysis of blockchain technology.

The book’s subtitle is “The rule of code”: a Lawrence Lessig-inspired theme running through the book. The authors suggest that blockchain code gives software developers the tools to “void jurisdictional rules” and that blockchain-based applications do not depend on laws but on lex cryptographica. “As a general rule, because of their decentralized and transnational nature, blockchain-based systems exhibit a degree of alegality.” This is confusing and not particularly helpful to understand the legal implications of blockchain. Blockchains are not outside the law. It may have been more helpful if the authors had limited their analysis to their more accurate statement that blockchain-based systems merely are “harder to control and regulate” and that existing laws may not cover all aspects of a new technology such as blockchain. This is not unique to blockchain technology, however.

The enforcement difficulties identified in the book are more pronounced for public, permissionless blockchains, on which the book focuses, than for private,
permissioned alternatives. The latter form a good part of current blockchain activity and are the preferred choice for a number of government and commercial applications (such as financial services or supply chain management). These private, permissioned blockchains do not necessarily result in the same legal risks. For example, they may be relatively centralised, making it much less problematic to identify the data controller under the EU General Data Protection Regulation, for example, or to enforce anti-money laundering laws.

Chapter 3 discusses digital currencies and decentralised payments, as one application of blockchain technology. While we associate crypto-payments with potential tax evasion or circumventing anti-money laundering laws, De Filippi and Wright correctly point out that the pseudonymity of many (permissionless) blockchains may facilitate enforcement, as it helps authorities identify account-holders and their transaction history through meta-data and transaction pattern analysis. The drawback is that this may “empower new forms of mass surveillance”, they warn.

Regulators have stepped up enforcement against crypto-currency issuers in recent months. Enforcement actions, so far, mainly target outright scams or blatant violations of securities laws. Increased usage of crypto-fuelled transactions on a blockchain may lead to another set of regulatory concerns: what if a crypto-token has changed hands on a blockchain in violation of the laws of country A, but not of country B? Such “tainted coins” may be discounted for users in certain jurisdictions but not others, undermining the fungibility of digital currencies. This is not a problem inherent in blockchain, but a problem in how most blockchains and blockchain-based applications currently operate. It is technologically feasible to tailor transaction rules to local laws, but at present there is little incentive to do so.

Blockchain technology allows for the implementation of so-called smart contracts, the legal validity of which is discussed in ch. 4. Smart contracts are executed automatically as soon as the conditions laid down in the code are met. Not all contractual clauses lend themselves to code language, De Filippi and Wright warn, pointing to ambiguous contractual clauses such as those on “good faith” or “best efforts”. Hybrid arrangements (combining prose and code) may help clarify the parties’ intent, which is particularly important where natural and code language contradict each other. As the authors note, courts will ultimately “construe the underlying code according to long-standing principles of contract law interpretation and, if necessary, the help of experts”. Although “there may not be a way to halt the execution of a smart contract after it has been triggered”, the difficulty of legal intervention should not be exaggerated. For permissioned blockchain services in particular, traditional legal means such as penalty payments may be as effective as for any other service provider.

De Filippi and Wright correctly point out the privacy concerns of smart contracts “because of the transparent nature of blockchains”, adding that privacy-preserving solutions (e.g. zero-knowledge proofs as developed by Zcash) are not quite robust yet. Nevertheless, it should be added that the partnership between Zcash and one of the largest investment banks at least suggests that scalable privacy-enhancing innovations may become commercially available in the near future.

Cryptocurrencies and so-called ICOs (Initial Coin Offerings) were a hot topic in 2017, although the hype seems to have lost much of its lustre since the crypto-bubble burst in early 2018. Chapter 5 looks at these smart securities and derivatives. The chapter briefly discusses the difference between utility and investment (securities) tokens, a topic on which Wright has written in much greater depth elsewhere. Shortly after the publication of the book, a US Securities Exchange Commission official stated that bitcoin and Ethereum are not securities and recently added that
the Securities Exchange Commission will provide “plain English” guidance on which tokens qualify as securities.

Smart securities and derivatives promise to speed up settlement time (lowering settlement risk). However, De Filippi and Wright warn that decentralisation of securities and derivatives transactions through blockchain also limits the benefits of financial intermediaries (such as clearinghouses), which can act as buffers in financial markets in times of crisis – a warning often overlooked. The authors, furthermore, argue that the transparency of blockchains could “negatively impact both corporate governance and financial innovation”. Financial innovation could be limited, for example, when a hedge fund’s trading strategy becomes visible if its transactions are recorded on a blockchain. Likewise, activist investors could be discouraged if their blockchain-based securities purchases would be visible for others, the authors argue (assuming such purchases are below the levels that trigger mandatory disclosure). A potential solution is to use separate public addresses (comparable to a bank account) for each transaction. As blockchain matures, the privacy-preserving innovations such as zero-knowledge proofs may become more robust and scalable. Moreover, not everyone would agree that greater transparency in the financial and capital markets is necessarily negative. In addition, a superficial reference to the alleged (but controversial) positive effects of corporate raiders would not seem to support the authors’ conclusion that “[o]verall … the benefits produced by a blockchain-based system would be offset by the emergence of a riskier financial system characterized by companies with weaker corporate governance practices”.

Chapters 6 and 7 discuss some of the risks and benefits of using blockchain to store data, such as health data, voting records or land ownership. The warning of unwarranted privacy and other concerns is a welcome change from overly optimistic assessments of blockchain’s potential. These concerns are more prominent for the public, permissionless blockchains (the book’s focus) than for the many private, permissioned blockchain solutions that have been developing at rapid pace in the past months.

Chapters 8 to 10 assess how blockchain can alter the future of organisations by allowing for decentralised decision-making and automated execution. For companies, for example, blockchain could simplify shareholder voting and render corporate decisions and procedures more transparent, the authors argue.

The final two chapters tackle the issue of how to regulate blockchain technology, a useful read for policymakers. The authors discuss different policy options, such as regulating end users directly (an option the authors do not appear to recommend), ISP providers, search engines, blockchain intermediaries (wallet providers or crypto-exchanges), miners and transaction processors, developers or hardware manufacturers. Importantly, the authors also point to the role of social norms in regulating blockchain networks. Less convincing is the argument in the first part of ch. 12 on the possibility of transposing laws into blockchain code, although the second part of the chapter describes the risks of “algoratic governance” to provide a more nuanced picture. Governments can use blockchain to streamline certain services or record data, but the feasibility and desirability to transpose laws into code (which the authors argue may reduce the need for interpretation or facilitate automated enforcement) would require a more in-depth discussion than the limits of the chapter allow for.

Blockchain and the Law is an introduction to blockchain technology for policymakers and lawyers more than a systematic analysis of applicable laws, case law or enforcement actions. The authors should nevertheless be commended for offering an excellent introduction to blockchain technology for those with a legal or regulatory interest in the subject. Readers not off-put by the emphasis on US-oriented and
ethereum-based examples or by the focus on public and permissioned blockchains will find in Blockchain and the Law an easily accessible initiation into a technology set to cross regulators’ and lawyers’ desks sooner rather than later.

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John Gardner’s beautifully argued latest (hereinafter, “FPLPL”) is the Sugar Ray Robinson of books on private law – it’s slim, but packs an almighty punch. In reading it, I was reminded of Robert Nozick’s verdict on John Rawls’s A Theory of Justice: “Political philosophers now must either work within Rawls’ theory or explain why not.”

The key to FPLPL, it seems to me, lies in a half sentence that is tucked away almost a third of a way through the book: “The law exists to improve people’s conformity with reasons that already apply to them” (p. 77). Gardner seeks in FPLPL to explain how private law helps us conform with the reasons that already apply to us in our everyday personal lives by (1) subjecting us to the obligations that we owe others in tort and contract; (2) subjecting those who breach those obligations to obligations to repair the consequences of their breach; and (3) giving people who have been the victim of a tort or a breach of contract wide latitude to decide whether or not to seek a remedy for that wrong, and what to do with that remedy when they get it.

It is not possible in a review of this size to do justice to the intricacy and cleverness of the arguments that Gardner makes in FPLPL; however, three dominant themes can be picked out. The first theme is the multiplicity of reasons that we are subject to. FPLPL “presents the world as a world of indefinitely many irreducibly different values competing for our, and hence for private law’s, attention”. This means that as I type this review, I have an indefinite number of reasons to engage in an indefinite number of other valuable activities such as visiting a friend, hopping on a plane to the Caribbean, going hang-gliding, and so on. The number of reasons I am subject to is exponentially increased by what Gardner calls the “classical view” of reasons, “according to which any reason for P to φ is equally a reason for any action by anyone, familiar or stranger, that contributes to P’s φing”. So while I am sitting here typing, I also have reason to help you and everyone else in the world to do whatever it is that you and they have reason to do.

The multiplicity of reasons that we are all subject to is reduced by duties and goals. If we are subject to a duty (whether legal or moral) to act in a particular way then “some or all of the valid reasons not to do the required thing are to be discounted . . . . A duty has some ability, in other words, to trump competing considerations”. Our goals also have this trumping effect in that “[w]hen certain goals are ours, we cannot regard them as just possible goals among others . . . adopting them as ours means coming to stand in a special relationship of commitment to them”. Adopting valuable goals is crucial to living a valuable life because without goals we would have no life; we would just drift aimlessly from one encounter with value to another. This, Gardner thinks, is why we have reason to hold on to the narrative arc of our life as it has been lived so far, and why private law is particularly concerned to help us hold on to that narrative arc by endowing us with what Gardner