Bear With Me:
The Bearer-Asset Dangers of Tokenizing Real Estate

Justin D. Lischak Earley[†]

As presented to the Hoyt Institute
at its May 2023 meeting in North Palm Beach, Florida

When I was young, reruns of golden-age shows of the 1930s and '40s were a television staple. A common plot device from the time was fights over deeds, as loss of one's property was a huge cultural touchpoint in the Great Depression. The underlying notion in these storylines was that if the villain could get possession of the deed to the land, then the villain had ownership of the land.

A good example is the classic Marx Brothers comedy *Go West*, where the plot revolves around who has possession of the deed to Dead Man's Gulch.[1] Early in the film, a grizzled miner signs a deed to the gulch and hands it to one of the brothers "as collateral" for borrowing ten dollars, but the brothers in turn hypothecate the deed to the villain as an "IOU" for purloining a ten-cent beer. When it turns out that the dusty gulch is a possible railroad route worth enormous riches, the hijinks ensue as everyone fights for possession of the deed,

---

[†] Justin Lischak Earley is Chief Innovation Underwriter for First American Title Insurance Company. The views that Justin expresses in this article are his own personal scholarly opinions, and are not necessarily the views of his employer. This is a purely academic article, and the views that Justin expresses here are in no, way, shape, or form investment advice as regards Justin's employer, nor are they legal advice as regards anyone or any situation. Justin is a Fellow of the American College of Mortgage Attorneys and a Fellow of the American College of Real Estate Lawyers. He received his law degree from Duke University, and received his master's degree in Human-Computer Interaction & Design from the University of California, Irvine. Justin can be found online at https://jdlesq.com. Special thanks are due to the author's colleague Michael P. O'Neal for lending his legal history expertise to this work.

[1] Go West (MGM 1940).

seemingly believing that possession of the deed *was* ownership of the land. In this Hollywood trope, the real estate deed was treated as more than just what lawyers would call "bearer paper."[2] Rather, the characters seemingly believed it be to a sort of "bearer asset" for which possession in and of itself embodied ownership of the real estate.

For purposes of this paper, I will call a hypothetical asset owned by whoever possesses it—whether rightfully or wrongfully—a "bearer asset." The term seems to be a 21st century neologism that has arisen in and around crypto culture, and it is not clear that the concept of "bearer assets" in their purest postulated form legally exists at this time.[3] There are compelling reasons why. The law has historically recognized a distinction between possession and ownership.[4] Were

---

[2] *Bearer Paper*, BLACK'S LAW DICTIONARY (8th ed. 2004) ("An instrument payable to the person who holds it rather than to the order of a specific person. Bearer paper is negotiated simply by delivering the instrument to the transferee.").

[3] *See, e.g.*, David Waugh, *Is bitcoin a bearer asset?*, COINBITS.APP (12 Jan. 2023), https://coinbits.app/blog/is-bitcoin-a-bearer-asset#:~:text=Unlike%20dollars%20held%20in%20a,bitcoin%20is%20a%20bearer%20asset. (period part of hyperlink) (last visited 23 Apr. 2023) ("Owning your keys means *owning your coins* in a pure, literal way. Therefore, bitcoin is a bearer asset." (emphasis in original)). There are certainly very close analogues (bearer paper) in existing commercial law. However, the existing legal concept of "bearer paper" lacks the purity seemingly sought by technologists in their hypothetical "bearer assets." In its purest form, their notion of a "bearer asset" would *completely* collapse the distinction between possession and ownership, granting ownership to whomever is in possession of the asset, whether that possession is rightful or wrongful. If so, it is not even clear that Bitcoin meets this test, as conceptually, the private key in a public-key infrastructure key pair is different from the Bitcoins held in a wallet secured by that private key. One could imagine ways (e.g., a Sybil attack, etc.) whereby the possessor of a private key is still deprived of "ownership" of Bitcoins believed to be represented by that private key. And under more traditional legal rules, although certain existing legal concepts of "bearer paper" may allow some *third parties* to *presume* that the possessor of bearer paper is the owner of that bearer paper, as between a thief and the rightful owner, the rightful owner still prevails (at least in theory). *Compare* Unif. Comm. Code § 3-420 ("The law applicable to conversion of personal property applies to instruments.") *with id.* at § 3-301 ("A person may be a person entitled to enforce the instrument even though the person is not the owner of the instrument or is in wrongful possession of the instrument."), *each available at* LEGAL INFORMATION INSTITUTE, https://www.law.cornell.edu/ucc (last visited 3 May 2023). Crypto enthusiasts appear to want to overturn even this rule.

[4] *See generally* MICHAEL HELLER & JAMES SALZMAN, MINE! HOW THE HIDDEN RULES OF OWNERSHIP CONTROL OUR LIVES 43-79 (Doubleday Press 2021) (reviewing the legal history of possession as a means of asserting ownership and wryly concluding that possession is really only "one-tenth of the law"); *id.* at 50 ("'Finders keepers, losers weepers' sounds catchy, but law and practice say the opposite. The real rule is 'Finders give it back' . . . .").

possession always the equivalent of ownership, society would devolve into a complete "might makes right, law of the jungle" war to possess.[5] This principle is so deeply rooted that it is hard to find a citation for it. One might as well be seeking a citation to show that the sky is blue. Everybody knows that you can't "just take stuff" from other people however and whenever you want; the question is what exceptions there are to that basic social norm of human civilization.[6] Every first-year law student is therefore intellectually baptized with the "fox hunting case" of *Pierson v. Post*[7] to force them to grapple with these and other atomic questions about the nature of property.

But even if the concept of pure "bearer assets" does not currently exist, I will assume for purposes here that it could, because technologists appear to believe that it should. An imprecise but real-life analogue familiar to all is the United States One Dollar bill.[8] If you drop a dollar bill on the ground, and someone else picks it up, good luck getting it back. It may still technically be "your dollar," but recapturing it could be nearly impossible as a practical matter (especially once it is spent).[9] This is the core feature of bearer assets, as I will use that term: they "belong" to whoever "bears" them (rightly or not) at any given moment.[10]

---

[5] *Cf. id.* at 70 (warning that without sensible rules of ownership design, "we may end up with a free for all").

[6] *See id.* at 50 ("[A]ll else equal, the person who was holding the thing earlier usually wins over whoever holds it later. But not always.").

[7] 3 Cai. 175 (N.Y. Sup. Ct. 1805).

[8] *Cf., e.g.*, NIALL FERGUSON, THE ASCENT OF MONEY: A FINANCIAL HISTORY OF THE WORLD 28 (Penguin Press 2008) ("Banknotes . . . are pieces of paper which have next to no intrinsic worth. They are simply promises to pay (hence their original Western designation as 'promissory notes') . . . .").

[9] *See* James S. Rogers, *The New Old Law of Electronic Money*, 58 S.M.U. L. REV. 1253, 1256 (2005) ("[A] person who takes currency gets good title, even if her claim is traced through a thief. Indeed, that principle is so fundamental that it is a bit hard to find a definitive citation.").

[10] This imprecise dollar bill example is admittedly a considerable simplification of a variety of complex existing commercial paper rules surrounding "possession," "ownership," and the comparative rights of competing parties. Uniform Commercial Code scholars will understandably bristle at the simplification. Technically, even paper currency is not a "bearer asset." But the core point about how "bearer assets" (as technologists conceive of them) collapse the distinction between possession and ownership holds.

Bearer assets would be as liquid as anything can be. There would be few (if any) transfer formalities around them. This is what would make them useful,[11] but it would also be their biggest drawback. The United States no longer prints paper currency in any denomination larger than $100,[12] and for good reason: Because bearer assets presumptively belong to whoever possesses ("bears") them, they would be prime targets for theft and fraud.[13] In the all-time-great action / Christmas movie *Die Hard*, the villains are out to steal $640 million in "bearer bonds," precisely because (as the story goes) they are highly liquid, easily transportable, and possession of them is the practical equivalent of ownership.[14] And in the mid-2010s, the Swiss banking firm UBS became embroiled in a criminal probe over its allegedly using bearer bonds to help its clients commit tax evasion.[15] Recognizing these dangers, the United States effectively ended the use of bearer bonds by law.[16]

This brief history illustrates a core tension between security and usability. The more liquid an asset becomes, the more prone it becomes to fraud and theft. Sensible legal and economic practice has therefore learned to limit bearer paper

---

[11] *Cf., e.g.,* Ferguson, *supra* n.8, at 24 ("Money, it is conventional to argue, is a medium of exchange, which has the advantage of eliminating efficiencies of barter . . . .").

[12] *American Money*, USA.GOV, https://www.usa.gov/currency#:~:text=Denominations,may%20still%20be%20in%20circulation. (period part of hyperlink) (last visited 27 Apr. 2023) ("The United States no longer issues bills in larger denominations, such as $500, $1,000, $5,000, and $10,000 bills.").

[13] *Bearer Paper*, LEGAL INFORMATION INSTITUTE, https://www.law.cornell.edu/wex/bearer_paper (last visited 22 April 2023) ("Because ownership of bearer papers is determined exclusively by possession, they were long criticized for their uses in money laundering and other illicit activity."). This use of the word "exclusively" is not entirely accurate. As cited earlier, the law of conversion still applies to bearer paper.

[14] DIE HARD (20th Cent. Fox 1988) (Hans Gruber: "I *am* interested in the $640 million of negotiable bearer bonds that you have locked in your vault."); *available at* https://youtu.be/pnEMkqteC6w?t=46 (last visited 22 April 2023).

[15] *E.g.*, *UBS confirms fresh tax evasion probe in the US*, BBC.COM, 10 Feb. 2015, https://www.bbc.com/news/business-31349135 (last visited 27 Apr. 2023).

[16] *See Bearer Paper*, LEGAL INFORMATION INSTITUTE, *supra* n.13 ("[T]he Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) prohibited issuing bearer papers. Furthermore, the passage of the Hiring Incentives to Restore Employment Act in 2010 stripped the value from the bearer papers already in circulation before TEFRA by absolving banks from the responsibility of redeeming them. These two acts have functionally abolished the use of bearer papers in the United States.").

to units of small-ish amounts, such as paper dollars in denominations no larger than $100.

All this accumulated prudence over the centuries stands in stark contrast to the current dreams of technologists who seek to "tokenize real estate."[17] Although I have yet to find any technologist who understands it through this framing, their marketing materials and rhetoric show what they really want to do is turn single-family homes into crypto token bearer assets.[18] In their ideal future, whoever has the crypto token representing Blackacre *has* Blackacre.[19]

Other scholars have rightly pointed out that the current law does not permit this, because there is nothing in existing Anglo-American real estate law that

---

[17] I presume that the reader has basic competency in blockchain, non-fungible tokens (NFTs), and their technological underpinnings. Accordingly, I will not devote space to explaining these concepts. For the reader who is seeking a basic understanding of these technologies, regrettably, I know of no even-handed, hype-free primers on the subject. Instead, I recommend reading the following foundational sources, in the following order: Whitfield Diffie & Martin E. Hellman, *New Directions in Cryptography*, 22 IEEE TRANSACTIONS ON INFORMATION THEORY 644 (Nov. 1976), *available at* https://ee.stanford.edu/~hellman/publications/24.pdf (last visited 23 Apr. 2023); R. Rivest, A. Shamir & L. Adelman, *A Method for Obtaining Digital Signatures and Public-Key Cryptosystems*, 21 COMMC'NS OF THE ACM 120 (Feb. 1978), *available at* https://dl.acm.org/doi/pdf/10.1145/359340.359342 (last visited 23 Apr. 2023); Leslie Lamport, Robert Shostak & Marshall Pease, *The Byzantine Generals Problem*, 4 ACM TRANSACTIONS ON PROGRAMMING LANGUAGES & SYSTEMS 382 (July 1982), *available at* https://www.microsoft.com/en-us/research/wp-content/uploads/2016/12/The-Byzantine-Generals-Problem.pdf (last visited 23 Apr. 2023); Paul Baran, *On Distributed Communications*, Rand Corporation Memorandum No. RM-3420-PR (Aug. 1964), *available at* https://www.rand.org/content/dam/rand/pubs/research_memoranda/2006/RM3420.pdf (last visited 23 Apr. 2023); Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008), *available at* https://bitcoin.org/bitcoin.pdf (last visited 23 Apr. 2023); Vitalek Buterin, *Ethereum: A Next-Generation Smart Contract and Decentralized Application Platform* (2014), *available at* https://ethereum.org/669c9e2e2027310b6b3cdce6e1c52962/Ethereum_Whitepaper_-_Buterin_2014.pdf (last visited 23 Apr. 2023).

[18] In this work I will focus on attempts to "tokenize real estate" in the sense of "tethering" ownership of typical single-family homes to NFTs. I recognize that the concept of "tokenizing real estate" is amorphous, and can include not only that use case, but also what effectively amounts to using NFTs to represent tenant-in-common (TIC) interests or shares in real estate investment trusts (REITs). There are significant corporate and securities law complexities around those use cases, which I also will not take up.

[19] "Blackacre" is real estate lawyer parlance for a generic parcel of land. It lies, of course, in the hypothetical State of Franklin, and the fictional idyll of Anytown.

legally "tethers" ownership of physical real estate to a crypto token representing that physical real estate. These scholars have done a great service by elucidating the "tethering" problem and its associated issues. Their work is cited below, and should be read nose to tail by anyone interested in this subject.[20]

In this paper, I take the next step and ask the larger normative question: Assuming that we as a society *can* change centuries of well-honed law to "tokenize" ordinary residential real estate by "tethering" it to a crypto token, *should we*?

I conclude that the answer is "no." In attacking the formalities surrounding real estate transfers under traditional Anglo-American property law, technologists mistake a feature for a bug. For reasons I will discuss in this paper, "more speed" and "more liquid" are not always "more better" when the transaction subject matter involves high-value, non-fungible assets like single-family homes. The challenge with invoking the bearer asset frame of reference for real estate is that bearer assets in the sense imagined by crypto enthusiasts suffer from both an involuntary transfer problem and an involuntary receipt problem. These issues make a bearer asset approach particularly ill-suited for residential real estate ownership, and explain why significant transaction formalities have arisen around real property. These formalities do indeed slow down transactions—*to the great benefit of the real estate markets*.

A home is typically the largest and most important purchase that an ordinary person makes in their life. Transaction formalities surrounding this vitally

---

[20] Juliet M. Moringiello & Christopher K. Odinet, *The Property Law of Tokens*, 74 FLA. L. REV. 607, 641 (2022) ("NFTs do not actually embody property rights in a reference asset. . . . They are not *tethering*—they do not embody property rights in a reference thing." (emphasis in original)). *See also* R. Wilson Freyermuth, Christopher K. Odinet & Andrea Tosato, *Crypto in Real Estate Finance*, – ALA. L. REV. – (forthcoming 2023), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4268587 (last visited 22 Apr. 2023). My point in this paper is that there is another important question that lies beyond tethering: If the law was changed such that it *did* allow the "tethering," should mere possession of the digital "tether" be the equivalent of ownership of the physical, tethered "thing"?

important life event are not a friction ripe for removing; they are a safeguard worth preserving. Blindly removing these guardrails in the name of technological progress could have catastrophic consequences for the real estate economy. These formalities, redundancies, and checkpoints are error-prevention mechanisms with *positive* effects: they help ward off irreversible mistakes and irreparable harm. And precisely because the defining feature of crypto tokens is that their transfer is effectively irreversible, crypto tokens are particularly ill-suited for the high-value, high-stakes world of physical real estate.

"Not your keys, not your crypto" is a common mantra in the crypto community.[21] It reflects a buyer-beware, "be governed accordingly," everyone-for-themselves libertarian ethos found in the technologist (and especially crypto) cultures. It may perhaps be an acceptable philosophical approach for digital collectibles of mere speculative worth in economic sectors populated by hard-core zealots. But as I discuss below, extending that mindset into "not your crypto, not your house" is a recipe for disaster that could wreak havoc on ordinary consumers and the real estate economy.[22]

---

[21] *Cf., e.g.*, Blockchain.com, *"Not your keys, not your crypto" explained*, MEDIUM.COM, https://medium.com/blockchain/not-your-keys-not-your-crypto-explained-ee84d7d09815 (last visited 27 Apr. 2023) ("Sharing [your] private key is basically like giving someone the keys to your safe deposit box or your house.").

[22] *See, e.g.*, David G.W. Birch, *Not Your Keys, Not Your Coins? Whatever.*, FORBES.COM, 15 Oct. 2021, https://www.forbes.com/sites/davidbirch/2021/10/15/not-your-keys-not-your-coins-whatever/?sh=409753624c1f (last visited 27 Apr. 2023) ("Not your keys, not your coins is a fun rallying cry for computer science undergrads and paranoid warlords, but it makes absolutely no sense that the average person should be loaded with this responsibility. . . . [W]hile the idea of self-sovereignty in crypto is empowering it demands a 'persistent competence' that [] is well beyond the capability and capacity of an average member of the public . . . .").

1. The Great Balance Between Law and Equity

To comprehend why technologists want to "tokenize real estate," one must first understand what they dislike about the existing system. In general, the complaint is that the real estate economy is full of needless waste and unnecessary red tape. For example, complaints about the paper-based nature of real estate are frequent, and many of those are well-founded. These topics have been treated extensively elsewhere,[23] and I will not take them back up here, other than to note that the real estate system is slowly digitizing in response to criticism that it is Paleozoic.

The bigger issue goes beyond real estate's addiction to physical paper documents. It goes to a perception that the transfer of real estate is filled with rituals that introduce delays and frictions into the transaction.[24] Technologists dream of a time when one can "push button, convey real estate." In their ideal world, real estate should be transferred as easily as a Bitcoin. They bristle at the notion of anything being able to delay, stop, or (heaven forbid) reverse a transfer otherwise agreed to.[25]

The existing real estate system does indeed have rituals and checkpoints that can delay a transaction's consummation. And indeed, third-party strangers to the transaction (courts) have the power to block the consummation of transactions

---

[23] *See, e.g.*, Justin Lischak Earley & Michael P. O'Neal, *Simulacra and Notarization: The Legal History of RON*, Am. College of Mortg. Attn'ys (2020 annual meeting papers), *available at* https://jdlesq.com/documents/Simulacra-and-Notarization-ACMA-Annual-Meeting-2020.pdf (last visited 23 Apr. 2023).

[24] *See, e.g., What is tokenized real estate? A beginner's guide to digital real estate ownership*, Cointelegraph.com, https://cointelegraph.com/learn/what-is-tokenized-real-estate (last visited 27 Apr. 2023) ("[T]here is no paperwork or waiting time for the completion of transactions. . . . Instead, the system works round-the-clock with transparency.").

[25] *See, e.g.*, Raymond Craib, *Crypto Bros Are Trying to Buy an Island in the Pacific*, Jacobin.com, https://jacobin.com/2022/04/libertarians-crypto-vanuatu-michael-oliver-nfts (last visited 27 Apr. 2023) ("[I]n the libertarian fantasies of crypto enthusiasts [true believers] dream of a world free from the regulatory state, law, and all other forms of external authority.")

that have been agreed to—and even to reverse transactions that have been consummated. These rituals, checkpoints, and veto powers reflect a careful balancing of contractual freedom and public protection that Anglo-American real estate law has worked out over a thousand years. It is important to understand the origin story of this hard-won balance: the great tug-and-pull between Law and Equity.

The Law vs. Equity debate is a question of which should prevail: what is written, or what is fair? The Law desires certainty, and favors what is written, even if that outcome may be unfair. By contrast, Equity desires the morally-satisfying, and gives the nod to what is fair, even to the contravention of what is written.

The problem of Law vs. Equity can be traced all the way back to two of the greatest minds of Western thought: Plato and Aristotle.[26] While it is a bit of a caricature, for purposes of this paper let us say that Plato is the great proponent of Law. In his *Laws*, Plato gave his position as:

> "We maintain, in fact, that statesmanship consists of essentially this—strict justice."[27]

While again a bit of a caricature, for purposes of this paper, let us say that Aristotle is the great proponent of Equity. In his *Nicomachean Ethics*, Aristotle gave his position as:

---

[26] *See, e.g.*, Andrew Sucre, Aristotle's Conception of Equity in Context, at 9 (May 2013) (masters' thesis), *available at* https://irl.umsl.edu/cgi/viewcontent.cgi?article=1201&context=thesis ("Whereas Plato claimed in the Laws that law is, more or less, equivalent to strict justice, Aristotle instead argues that law is by nature incapable of encapsulating justice. Law is universal, and inevitably there arise particular situations for which the universal rule is inapposite.").

[27] *Id.* at 4-5 (quoting Book VI of *Laws* in PLATO: COMPLETE WORKS 1433 (John M. Cooper ed., Trevor Saunders trans., Hackett Publ. Co. 1997)).

> "And this is the nature of the equitable, a correction of law where it is defective owing to its universality."[28]

These two things are forever in irresolvable tension. Where Law wholly squeezes out Equity, there is certainty of contract enforcement, but a "den of thieves" mentality ultimately chills the market. Where Equity wholly displaces Law, contracting parties know that fairness is protected, but then fear whether their bargains may be challenged as unfair, and this too chills the market. Anglo-American real property law has thus learned that the two things must be kept in delicate balance by judges who rule carefully, based on the particular fact patterns before them at the time.

A key example of how Anglo-American property law has struck this balance are the doctrines surrounding mortgages.[29] Originally, mortgage practice was dominated by Law. A debtor was required to pay their debt to the creditor by a date certain (called "law day"), or the collateral property was immediately forfeited to the creditor. It goes without saying that this "strict justice" approach led to chicanery. For example, creditors found it to their advantage to be mysteriously unavailable on law day, even where the debtor was ready, willing, and able to pay up.

To dissuade this sharp practice, Equity began to intervene. By the early 1600s, courts sitting in Equity began to grant debtors a period of time (called the "equity of redemption") after law day during which the debtor could redeem the collateral from the debt. But how long was this period of time? Originally, it was an uncertain, "reasonable" period. But this too led to problems and abuses, this time by debtors who were able to drag out the time period for payment without

---

[28] *Id.* at 8 (quoting *Nichomachean Ethics* in INTRODUCTION TO ARISTOTLE 447-49 (Richard McKeon ed., W.D. Ross trans., The Modern Library 1992)).

[29] There are numerous versions of this history that can be found in various sources. Freyermuth, Odinet, and Tosato's forthcoming paper collects many of them in an accessible and readable format. Rather than inundate the reader with footnotes, I will simply refer the reader to their excellent forthcoming paper in the Alabama Law Review, *supra* n.20.

real consequences. And so courts learned that the equity of redemption had to be cut off at some time certain after failure to repay the debt—a process then called "foreclosing the equity of redemption," and which we today just call "foreclosure." This careful balance between what is written and what is fair has stood the test of time.

This history teaches critical lessons for the concept of tokenizing real estate. It shows that an all-Law, no-Equity mentality is not sustainable for a well-functioning real estate market. Instead, the real estate markets require a careful balance of Law and Equity, which bearer asset approaches are ill-suited to maintain. As I discuss below, Anglo-American property law has achieved this balance through at least two mechanisms that are highly relevant to tokenizing real estate: the tripartite deed formalities of execution, delivery, and acceptance; and the ability of neutral, disinterested third-party judges to alter, amend, or even reverse transactions to prevent unjust outcomes. As I further show below, each of these mechanisms ties directly to canonical user experience heuristics of preventing errors before they happen, and allowing emergency exits for unintended outcomes. Blind to history, the current mindset behind "tokenizing real estate" would walk straight into readily foreseeable traps.

2. The Tripartite Deed Formalities

It is a black letter rule of Anglo-American property law that no conveyance of real estate is valid unless it is executed in writing by the seller; delivered to the buyer; and accepted by the buyer. These tripartite deed formalities of execution, delivery, and acceptance are error-prevention mechanisms that the law has created to help ward off fraudulent, accidental, or otherwise undesired conveyances before they happen. As stated by a leading treatise,

> "Land is an important asset . . . in the American economy. It represents a significant investment, and may even embody the life savings of the owner. The

> law is replete with rules and principles designed to protect the owner from fraudulent activities which would destroy that investment and, by extension, faith in the economic system. It is logical that the legal system would install some procedure designed to protect the owner, as well as the conveyancing system, from the execution and recording of fraudulent deeds and other documents."[30]

In creating these procedural checkpoints, the law has learned by generations of practice what user experience pioneer Jakob Nielsen distilled into his canonical fifth heuristic of good design: "[T]he best designs carefully prevent problems from occurring in the first place."[31] This is just what the tripartite deed formalities function to do.

2.1. Execution

Since at least the passage of the Statute of Frauds in 1677,[32] no conveyance of real estate or agreement to subsequently convey real estate has been enforceable, unless reduced to writing, and signed by "the party to be charged" (here, the seller). As the name of the great statute implies, its purpose is to prevent fraud.[33]

---

[30] 14 Richard R. Powell, Powell on Real Property § 81A.04[1][g][i] (Celeste M. Hammond ed., 1999) (hereinafter "Powell").

[31] *10 Usability Heuristics for User Interface Design*, Nielsen Norman Group, 24 Apr. 1994, updated 15 Nov. 2020, https://www.nngroup.com/articles/ten-usability-heuristics/ (last visited 27 Apr. 2023).

[32] 29 Chas. 2 c. 3 (1677), *available at* https://www.legislation.gov.uk/aep/Cha2/29/3/introduction#text%3Dfrauds (last visited 27 Apr. 2023).

[33] *See Charles II, 1677: An Act for the prevention of Frauds and Perjuryes*, British History Online, https://www.british-history.ac.uk/statutes-realm/vol5/pp839-842#h3-0003 (last visited 27 Apr. 2023) ("For prevention of many fraudulent Practices which are commonly endeavoured to be upheld by Perjury and Subornation of Perjury . . . .").

Were the rule otherwise, a fraudulent buyer could go to court to sue a hapless and involuntary seller by fabricating a fictitious oral deal out of thin air.[34]

The interesting thing about the execution formality as regards tokenizing real estate is not the "in writing" part. Technologists want real estate to be transferred by computer code, which I will assume for purposes of this discussion is as much "in writing" as is any electronic document.[35] The interesting part is what it means to be "signed by the party to be charged."[36] Under traditional Anglo-American property law, the rule about fraud is clear: A forged deed conveys no title. If someone forges a seller's signature on a deed, that conveyance is a legal nullity.[37] Real estate law has therefore developed rituals and requirements around deed execution, such as mandates for witnesses or notarizations, to ward off fraudulent executions.[38]

Further, it does not matter whether the forged deed is recorded in the county land records. The "public records" are in this way potentially unreliable, because the controlling factor is the seller's genuine intent to transact. What is visible on

---

[34] 2 WILLIAM BLACKSTONE, COMMENTARIES 203, ¶ 297 (Wilfrid Prest ed., Oxford Univ. Presss 2016) ("Formerly many conveyances were made by parol, or word of mouth only, without writing; but this giving a handle to a variety of frauds the [Statute of Frauds was passed] . . . .").

[35] This may be debatable, as one might argue that at least some portion of the "in writing" requirement seems to serve a public-notice function such that non-parties to the transaction (such as judges) can interpret the transaction. The average person (and indeed, the average judge) probably lacks the code literacy to unpack a blockchain-based transaction. Whether or not a contract is "in writing" if no one but blockchain programmers can read and interpret it is an interesting subject for another day. For purposes of this paper, I assume that blockchain code meets the "in writing" test. *Cf., e.g.*, *id.* at 203, ¶ 297 ("[T]he deed must be *written*, or I presume *printed*, for it may be in any character or any language . . . ." (emphasis in original)).

[36] 14 POWELL § 81A.04[1][e] ("[T]he Statute of Frauds, as adopted by the various American jurisdictions . . . requires a deed to be signed by the grantor or the grantor's agent in order to be enforceable. The grantor's signature is necessary because he or she is the party to be charged under the statute.")

[37] R.G. Patton, *Deeds*, in AMERICAN LAW OF PROPERTY: A TREATISE ON THE LAW OF PROPERTY IN THE UNITED STATES § 12.58, p. 303 (A. James Casner ed., 1952) ("[I]n a case where the . . . signature [of the grantor] was in fact forged, no title passes.")

[38] *Id.* § 12.57, p. 301 ("Execution of a deed comprises all acts necessary to make it effective as a conveyance when put into force by delivery. . . . [E]xecution is used . . . as pertaining to signing, sealing, attesting, and acknowledging the instrument.").

the face of the documents is probative of intent, but certainly not dispositive. As one legal scholar describes it:

> "When we come to the Anglo-Norman age we find that already the law had made a great distinction. It is clearly recognized that a deed does not operate as a conveyance, but is simply evidence."[39]

This operating principle drives crypto enthusiasts mad, because they view possession or control of private keys as synonymous with binding authority to transact, and thus *they view evidence of conveyance as conveyance itself*. In crypto cultures, it does not matter whether the private key in question was lost, stolen, or otherwise obtained through nefarious means. Once a private key is used to sign a transaction, the transaction is irreversible unless the transferee *voluntarily* chooses to reverse it. In this way, to crypto enthusiasts, fraudulent transactions are still enforceable transactions.[40] Under this paradigm, the "public records" (in this case, the crypto system) are always reliable, because the seller's intent to transact is irrelevant to enforceability. Crypto system records are meant to be "WYSIWYG" (what you see is what you get).

What crypto enthusiasts seek to gain from their preferred approach is certainty. In this way, they are like the creditors of ancient mortgages who desired the finality and inflexibility of law day. Centuries of experience show what is likely to happen here: fraud and errors will start to seep in, and market participants will cry out for fairness and flexibility.[41] To this end, the story of Seth Green and

---

[39] THEODORE F.T. PLUNKETT, A CONCISE HISTORY OF THE COMMON LAW 611 (2010 ed.).

[40] *See, e.g.*, Edward Ongweso Jr., *'All My Apes Gone': NFT Theft Victims Beg for Centralized Saviors*, VICE.COM, 6 Jan. 2022, https://www.vice.com/en/article/y3v3ny/all-my-apes-gone-nft-theft-victims-beg-for-centralized-saviors (last visited 23 Apr. 2023) ("Kramer quickly took to Twitter and begged for help from OpenSea and the NFT community for help regaining his lost NFTs. Unsurprisingly, he was ripped to shreds by others . . . ."); *id.* (noting "a key tenet of the industry that often bumps up against usability: the idea that 'code is law,' and once your tokens are in someone else's digital wallet, that's the end of the game").

[41] *E.g., id.*

his stolen "Bored Ape Yacht Club" NFT stands as an apt warning. Green was tricked by a scammer, who stole his treasured collectable NFT, worth a six-figure sum.[42] Without an authoritative intermediary to whom he could turn to undo the theft, he had to resort to using his fame and fortune for self-help.[43]

Green is a celebrity with financial and public-profile resources that he could tap to remedy his purloined digital collectible. Most ordinary homeowners lack these resources. A fraudulently transferred home would be financially catastrophic to an ordinary consumer in a way that Green's challenges with a stolen digital collectible are not. Allowing an "anything goes, everyone for themselves" rule to prevail in the name of crypto token efficiency by eliminating the traditional rules about deed delivery would expose ordinary consumers to risks that they are ill-suited to bear.[44]

2.2. DELIVERY

Under Anglo-American legal principles, a deed must be delivered from grantor to grantee (or to and then from an authorized intermediary like today's escrow agents) for the deed to be effective.[45] The classic fact pattern around delivery is a deed that was validly and knowingly executed by the grantor, but which the

---

[42] Eric Mack, *How Scammers Stole Seth Green's Bored Ape Yacht Club NFT and Converted It to Cash*, FORBES.COM, 11 July 2023, https://www.forbes.com/sites/ericmack/2022/07/11/how-scammers-stole-seth-greens-bored-ape-yacht-club-nft-and-converted-it-to-cash/?sh=53a870a41f85 (last visited 23 Apr. 2023).
[43] *E.g.*, David Lumb, *Seth Green's Stolen NFT Ape 'Is Home,' Safe and Digitally Sound*, CNET.COM, 9 June 2022, https://www.cnet.com/personal-finance/crypto/seth-greens-stolen-nft-ape-is-home-safe-and-digitally-sound/ (last visited 23 Apr. 2023) (noting that buying the stolen NFT back cost Green about $300,000).
[44] As an analogue, consider the law of investment securities, where there are other stringent controls meant to prevent bad actors from taking advantage of ordinary consumers. Only for sophisticated "accredited investors" do we allow some of those constraints to drop, but even then it still is not the free-for-all envisioned by crypto enthusiasts.
[45] *See, e.g.*, 2 WILLIAM BLACKSTONE, *supra* n.34, at 209, ¶ 307 ("[Another] requisite to a good deed is that it be *delivered*, by the party himself or his certain attorney: which therefore is also expressed in the attestation; 'sealed and *delivered*.'" (emphasis in original)).

grantor simply placed in the grantor's locked safe, without telling anyone. Did title transfer to the grantee? The answer is no. The deed was never delivered.[46]

The delivery requirement leads to a "simultaneous action" problem. The challenge is "who moves first?" If buyer sends the money and seller absconds without providing the deed, buyer is seriously harmed. Similarly, if seller provides the deed but buyer does not pay up, seller is seriously harmed. The parties become like unwitting participants in a hostage swap, watching with bated breath as the captives make a slow and simultaneous walk towards the other side. This is no way to run an effective real estate marketplace.

To avert this outcome, it has become common for transaction parties to select a mutually trustworthy third person to serve as "escrow agent" who holds the deed and the money during the crucial consummation timeframe, and releases each to the respective party once all the players sign off.[47] Escrow agents are thus a critical feature of modern real estate transactions.[48] Of course, the selection of such a third party introduces time, cost, and some degree of uncertainty into the transaction.[49] Escrowees generally do not serve in this crucial intermediary role for free. And the escrow agent must be prepared for hard fact patterns if one party disagrees with the other.[50]

---

[46] 14 POWELL § 81A.04[2][a][ii] ("A deed becomes effective as of the date of its delivery. If delivery is determined to be lacking, the deed is void and no transfer is deemed to have occurred. Not only is failure of delivery binding on the grantee and persons with notice thereof, it also renders the deed void even as to bona fide purchasers.").

[47] *Id.* § 81A.04[2][a][vi] ("The escrowee is under the direction and control of both grantor and grantee, and yet is independent of the unilateral control of either of them.").

[48] *Id.* § 81A.04[2][a][v][A] ("The use of an agent as part of the delivery process is a common occurrence. The agent may be either the agent of the grantor or the agent of the grantee. The agent may also be an independent agent, known as an escrow agent or escrowee.").

[49] *See, e.g.*, 23 AM. JUR. 2D *Deeds* § 102 ("There is no question but that a deed, to be operative as a transfer of realty, must be delivered. The controversial questions are those concerning the sufficiency of the facts relied upon to establish delivery.").

[50] *Id.* § 105 ("Delivery of a deed is a question of intent. . . . [T]he intention of the parties is an essential and controlling element of delivery of a deed . . . .").

But beyond these drawbacks, escrow agents also provide discretion and flexibility into a transaction. They can reason in real time with the parties, asking them to overlook small, immaterial problems. They can coordinate communications in real time, and thereby sort mountain from molehill. Consider the common fact pattern where a low-value deliverable did not arrive at the precisely appointed time. Perhaps it was a merely ministerial disclosure document, or a small shortage in the fees owed to a realtor. If such a low-value deliverable arrives at 4:01 pm, but the deadline was 4:00 pm, should the whole transaction be abandoned for failure to strictly comply? Humans can exercise discretion and seek flexibility to smooth over wrinkles like these.[51]

To be sure, it is possible to imagine computer-program escrow agents. For example, a computer program could be created that holds an NFT and payment therefor, and releases each upon satisfaction of certain preprogrammed conditions. The important words there are "preprogrammed conditions."[52] Generations of legal experience show that it is not possible to anticipate *all* possible futures and draft for them. Just as was Aristotle's response to Plato, someone must have discretion to correct the inflexibility of what was preprogrammed.[53]

Without these intermediaries, transaction parties would be forced to spend inordinate amounts of time and energy attempting to create preordained rules for all imaginable factual permutations.[54] The rulesets grow longer and longer,

---

[51] *Cf., e.g.*, *id.* § 111 ("[W]hether there has been a valid delivery generally presents a mixed question of law and fact. The facts and circumstances of the case must be considered . . . .").
[52] *Cf., e.g.*, W.J. Hamilton, What Constitutes the Valid Delivery of a Deed 5 (1890) (thesis at Cornell Univ. School of Law) ("In the case of delivery as an escrow, the grantor has bound himself, from the moment of placing the deed within the hands of the depository, to observe the condition upon which it was so deposited; and to permit the deed to take effect upon the performance of the same.").
[53] 23 AM. JUR. 2D *Deeds* § 112 ("[N]o precise formula of acts or words is necessary [for delivery], and there is no universal test, applicable to all cases, whereby the sufficiency of delivery can be determined.").
[54] It can be argued that the hard fact patterns are edge cases that do not occur with frequency. But real estate market participants intuitively know what Nassim Taleb formalized: You must focus not on the *frequency* of a bad outcome, but the *consequences* of the bad outcome. *E.g.,* NASSIM NICHOLAS TALEB, THE

and still never account for everything. As the rulesets become ever more bloated, the transaction costs grow ever greater. Any repeat player in the real estate marketplace is familiar with the problem of "overlawyered documents" with pages and pages of text attempting to talismanically ward off every imaginable challenge. Changing the context from legal prose to computer code does not alter this dynamic. As one commentator notes,

> "Brute-force, handcrafted AI has become unfashionable . . . . That's partly because it can be 'brittle': Without the right rules about the world, the AI can get flummoxed. This is why scripted chatbots are so frustrating; if they haven't been explicitly told how to answer a question, they have no way to reason it out."[55]

In this way, the *absence* of human escrow agents could actually *increase* transaction costs and deal frictions. Escrow intermediaries are a beneficial catalyst to the delivery function, not a friction or cost to be extracted.

2.3. Acceptance

Although we tend to think of real estate transactions as consensual, this is true largely because of the common law rule about acceptance. The rule about acceptance is that even if a deed is properly executed and delivered, the transfer of title does not occur if the grantee does not accept the conveyance. Under

---

Black Swan: The Impact of the Highly Improbable 363 (Random House Trade Paperback ed. 2021) ("You do not just care about frequency or probability, but about the impact as well, or even more complex, some function of the impact."). Real estate is too expensive to ignore high-consequence edge cases on the theory of "that almost never happens." It matters a lot if it happens to you.

[55] Clive Thompson, *How to Teach Artificial Intelligence Some Common Sense*, Wired, 13 Nov. 2018, *available at* https://www.wired.com/story/how-to-teach-artificial-intelligence-common-sense/ (last visited 23 Apr. 2023).

traditional Anglo-American property law, no one can be forced to accept title to real estate against their will.[56]

The acceptance rule prevents grantors from pawning off undesired properties onto unwitting grantees. The paradigm case is environmentally contaminated property. The law imposes cleanup costs on owners of "dirty dirt,"[57] and those costs can be backbreaking. Without the acceptance rule, toxic waste dumps would be continually passed around like hot potatoes, with one unsuspecting grantee forced to pawn the dirty dirt off onto another, over and over and over again. This too is no way to run a real estate market.

As with execution, acceptance is a matter of intent.[58] Intent cannot be determined simply by looking at the land title records. For even if a property owner genuinely executes a deed to a toxic waste dump and records it in the county records, that deed has no effect whatsoever if the deed was never accepted by the grantee. This too frustrates crypto enthusiasts, who believe that whatever the publicly available records show must control. And so they have designed their systems accordingly.

Predictably, the problem of "spam NFTs" has arisen in response. Because by design a typical crypto token must be owned by *someone*, unwanted tokens can be foisted onto the unsuspecting.[59] There is no "acceptance" rule in typical

---

[56] 14 POWELL § 81A.04[2][b] ("The mere delivery of a deed by the grantor in insufficient for an effective conveyance. The grantor cannot thrust the property onto the grantee against his or her will, even if the conveyance is gratuitous. To complete the transaction, the grantee must accept the conveyance.").
[57] See 42 U.S.C. § 9607(a) (stating that, inter alia, "owners" of contaminated property "shall be liable for all costs of removal or remedial action incurred by the United States Government").
[58] 23 AM. JUR. 2D *Deeds* § 150 ("There must be a giving by the grantor and a receiving by the grantee with a mutual intention to pass a present title from one to the other. . . . If the grantee never accepts the deed, there is no delivery, and the deed is void."); *id.* at § 151 ("Acceptance is primarily a matter of the grantee's intention; hence, the significant inquiry is as to the grantee's intention as manifested by the grantee's words and acts.").
[59] *See, e.g., Spam NFTs and How to Fix Them*, ALCHEMY.COM, 12 Aug. 2022, https://www.alchemy.com/overviews/spam-nfts (last visited 23 Apr. 2023) ("Because anyone can send and

crypto systems. The only way to rid oneself of an unwanted token is to pass it off to another. As a crude workaround in response to the lack of an "acceptance" rule akin to real estate law, participants in crypto systems have been forced to set up "dummy wallets" into which undesired tokens are "burned" by abandoning the private keys such that the unwanted tokens become trapped.[60] Of course, the token's ownership history will forever show that the unwitting owner had it for some period of time. This seems highly problematic when mere association with the undesired token may carry societal stigma or potential legal liability.[61]

While these problems are not all that serious for digital collectibles, without material associated liabilities, being passed around within tight-knit enthusiast communities, the discussion above indicates why it simply cannot be the rule for physical real estate. Ownership of physical real estate can carry significant downside risks that ripen into legal liabilities. Beyond the problem of toxic waste dumps being unwittingly foisted onto innocent grantees without their consent, owning property on which slip-n-fall injuries occur, or criminal activities are conducted, can expose the owner to legal risk.[62] Allowing risky properties to become liability grenades that can be lobbed towards unwitting others is no way to run a real estate economy.

3. The Role of Courts

On the first day of the twenty-first century, Lawrence Lessig declared, "Code is law."[63] This is one of the most misunderstood phrases of the twenty-first century.

---

receive tokens to and from a wallet address on public blockchains, unwanted NFTs will occasionally appear in your wallet.").

[60] *See, e.g., id.* ("To burn spam NFTs, send them to a burn address . . . ."). It is also worth pointing out that there are other deep-rooted Anglo-American real estate law principles that exist to avoid situations where real property is "owned by no one." Here too it would be very hard to square crypto culture's desired outcomes with centuries of legal history.

[61] *See, e.g., id.* ("People send unsolicited spam NFTs for many reasons including . . . to embarrass or annoy a wallet owner . . . .").

[62] Or even just the ordinary burden of property taxes.

[63] Lawrence Lessig, *Code is Law: On Liberty in Cyberspace*, Harvard Magazine, 1 Jan. 2000, *available at*

Technologists have adopted it as a mantra that expresses their preferred future, in which governments and their court systems have no jurisdiction over anything that happens on technologists' systems. This is not at all what Lessig meant,[64] but the catchphrase aligned with other techno-libertarian thought prevalent in the sector, both then and now. For example, in 1996, an open letter signed in Davos declared:

> "Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather."[65]

Crypto enthusiasts who seek to tokenize real estate often extend this "code is law" mantra into their preferred system design. They believe that the consummation of a transaction should be solely within the control of those holding the private keys that correspond to the crypto tokens in question. In their view, no one other than the keyholders should be able to interfere with or reverse a transaction that was agreed-to by the keyholders (even if the keyholders are not "truly" the asset owners). Some have even mused about how to evade all government jurisdiction entirely, and thereby prevent governmental meddling in the parties' transaction.[66]

---

https://www.harvardmagazine.com/2000/01/code-is-law-html (last visited 27 Apr. 2023).

[64] Lessig's point was that if we as a society do not actively engage in legislating and regulating the space, code will *de facto* define the boundaries of permissible behavior, and thus serve the social functions presently reserved for law. *Id.* ("For unless we understand how cyberspace can embed, or displace, values from our constitutional tradition, we will lose control over those values. The law in cyberspace—code—will displace them."). Nearly a quarter-century later, Lessig's warning still seems unheeded.

[65] John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELECTRONIC FRONTIER FOUNDATION, 8 Feb. 1996, https://www.eff.org/cyberspace-independence (last visited 27 Apr. 2023).

[66] *See, e.g.*, Craib, *supra* n.25 (noting that crypto true believers have "schemes to exit from the territorial jurisdiction of the nation-state" and have "even sought to buy and govern islands, using oceans to separate themselves from taxes and democracy").

The problem with this approach when it comes to physical real estate is that physical real estate is different from other assets, both virtual and physical. Indeed, Anglo-American property law treats every piece of physical real estate as unique and nonfungible,[67] which triggers a variety of legal doctrines. Some special ones worth noting for this discussion are that courts have the power to block transactions from occurring, force transactions to occur, and even reverse transactions that *have* occurred.[68] Crypto enthusiasts find these possibilities repulsive, because they see them as casting doubt on freedom of contract, and thus introducing frictions to be removed.

Once again, they mistake feature for bug. At least part of the role that courts serve in real estate transactions is to prevent irreparable harms from unfairly befalling the weak or unsuspecting. Courts therefore serve as a discretionary safety valve.[69] The law has learned through generations of wisdom what user experience pioneer Jakob Nielsen distilled into his third heuristic of good design: "Users often perform actions by mistake. They need a clearly marked 'emergency exit' to leave the unwanted action."[70] Courts serve as neutral gatekeepers who decide whether or not actions were truly "by mistake," and whether parties should be allowed access to the "emergency exit."

---

[67] *See* 14 POWELL § 81.04[1][a] ("No other parcel [of real estate] has the same characteristics of location, physical appearance or condition as the specific property offered by the seller. . . . Because of the uniqueness of [real] property, no other remedy [besides injunctive relief] is adequate.").

[68] Although rare, this sort of injunctive relief is within the equitable powers of Anglo-American courts having jurisdiction over real estate. *Cf. id.* § 81.04[1][a] ("Jurisdiction to grant relief in the form of specific performance is very broad; there are many kinds of land interests and transactions that may be involved in a demand for this type of equitable remedy.").

[69] The bar for exercising the sort of injunctive relief discussed above is justifiably high, but it does exist. *See id.* § 81.04[1][c] ("A decree of specific performance is not a matter of right even to enforce the terms of a legal and binding contract. It is, rather, a matter of grace resting upon basic equities and residing within the discretion of the court, depending on the facts of each particular case.").

[70] *10 Usability Heuristics for User Interface Design*, NIELSEN NORMAN GROUP, 24 Apr. 1994, updated 15 Nov. 2020, https://www.nngroup.com/articles/ten-usability-heuristics/ (last visited 27 Apr. 2023).

A home is central to human life in a way that crypto collectibles are not. One cannot live in a CryptoPunk[71] or CryptoKitty.[72] Without a neutral, independent court system that has true enforcement authority over real estate transactions, engaging in those transactions would become even more harrowing than it already is. Parties would live in fear that any innocent misstep could be mercilessly leveraged against them. Snake-oil sales, bait-and-switches, and all sorts of nefarious tactics would become fair game. This breeds a culture of suspicion and fear, which *creates* the type of market frictions that the enthusiasts incorrectly attribute to courts. Generations of legal history teach that what technologists see as a transaction impediment is actually an accelerant.

Some technologists have mused that parties will find private ways to settle these types of disputes, or that some consensual system of dispute resolution will arise that will obviate the need for governments and their courts.[73] Such things have been said many times before, and history teaches us otherwise. Formal methods of social control must arise when societies become too large for informal methods of social control to function effectively.[74] Even if hard-core, repeat players in tight-knit crypto communities may have social incentives to settle their disputes amicably, that logic has never successfully extended to large-scale societies with diverse players who are never likely to see one another again. As

---

[71] *CryptoPunks*, LARVA LABS, https://www.larvalabs.com/cryptopunks (last visited 27 Apr. 2023).
[72] *CryptoKitties*, DAPPER LABS, https://www.cryptokitties.co/ (last visited 27 Apr. 2023).
[73] *E.g.*, John Perry Barlow, *A Declaration of the Independence of Cyberspace*, *supra* n.65 ("Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract.").
[74] *E.g., Formal Organizations*, in SOCIOLOGY: UNDERSTANDING AND CHANGING THE WORLD, *available at* UNIV. OF MINNESOTA LIBRARIES, https://open.lib.umn.edu/sociology/chapter/6-3-formal-organizations/ ("Max Weber . . . recognized long ago that as societies become more complex, their procedures for accomplishing tasks rely less on traditional customs and beliefs and more on rational (which is to say rule-guided and impersonal) methods of decision making." (emphasis removed)) (last visited 27 Apr. 2023).

James Madison put it, "If men were angels, no government would be necessary."[75] It goes without saying that humans have not proven themselves angelic.

* * *

Before the Pandemic, I attended a conference at which a speaker on the practice of innovation sagely noted:

> "To be truly innovative, you must be steeped in tradition. Otherwise, you're just making noise."[76]

Many technologists are proposing approaches for "tokenizing real estate" that reveal a serious lack of historical understanding. Because of that deficiency, much of what circulates in this sector is just noise. The real estate conveyance rituals of execution, delivery, and acceptance, as well as the transaction-oversight role of independent courts, are not useless waste to be wrung out of a future real estate system. They are critical safeguards that ensure the functionality of any real estate system—both past and future.

Those who fail to understand history eventually find themselves repeating it.[77] Should crypto enthusiasts actually build the "frictionless" system that they envision, they would soon find that they would have to rebuild Web3 analogues of the very same deeply rooted, "friction inducing" legal rules that they just tore down. Rather than suffering through the consumer harms that would arise from this misguided path, we would be better off investing in digitizing and modernizing the existing system of real estate transfer to offer the same

---

[75] THE FEDERALIST No. 51 (James Madison), *available at* https://guides.loc.gov/federalist-papers/text-51-60#:~:text=If%20men%20were%20angels%2C%20no,on%20government%20would%20be%20necessary. (period part of hyperlink) (last visited 27 Apr. 2023).

[76] Jeff Margolis, CEO of Welltok, speech at the Univ. of California, Irvine Road to Reinvention conference (22 Mar. 2018).

[77] There are numerous iterations of this aphorism. The phrase appears to be best attributed to George Santayana. *E.g., George Santayana*, WIKIQUOTE.ORG, https://en.wikiquote.org/wiki/George_Santayana (last visited 1 May 2023).

longstanding protections of Anglo-American real estate law, but with a superior user experience that leverages technology in ways recognized to be positive.

Just because a technology *can* do something does not mean that it *should*—especially when there are deep historical reasons why it should *not*. As a fellow legal thinker once mused, "The enthusiasts want the technology of tomorrow that would take us back to the law of 800 years ago."[78] In my view, throwing out these centuries of hard-won experience is what would *truly* be wasteful.

JLE

[78] Greg Loubier, Justin Lischak Earley & Josias Dewey, Blockchain & The Future of Real Estate Finance, panel discussion at the American College of Mortgage Attorneys 2018 Annual Meeting (Oct. 12, 2018).