Slutskiy, Pavel. 2024. "Yes, You Should Own Bitcoin." *Journal of Libertarian Studies* 28 (1): 144–62. https://doi.org/10.35297/001c.123605.

ARTICLES

Yes, You Should Own Bitcoin

Pavel Slutskiy[1][a]

[1] Faculty of Communication Arts, Chulalongkorn University

Keywords: bitcoin ownership, private law, property rights, scarcity

https://doi.org/10.35297/001c.123605

Journal of Libertarian Studies

Vol. 28, Issue 1, 2024

This article attempts to challenge the argument that bitcoin cannot be owned within a libertarian legal order. According to the contested view, bitcoin, as a digital asset, does not meet the criteria for traditional ownership due to its nonphysical nature as an intangible asset. However, the counterargument presented in the article asserts that people should have property rights over bitcoin due to the facts that the technology behind bitcoin makes it a scarce rivalrous resource and conflicts over the use of bitcoin goods can arise. It is the general function of property rights to avoid possible clashes over the use of scarce, rivalrous resources by assigning rights of exclusive ownership; hence, property rights should extend to bitcoin. The article also discusses the implications of recognizing bitcoin as an ownable scarce resource within a private law society and addresses the challenges associated with penalizing bitcoin theft.

The title of this article is not financial advice but rather an attempt to challenge a view shared by several libertarian writers on bitcoin ownership. Among those who argue that bitcoin cannot (or should not) be owned are Konrad S. Graf (2014, 2015) and Stephan S. Kinsella (2021a, 2021b, 2024), who both insist that property right claims over bitcoin should not be recognized under a libertarian legal order. However, the counterargument presented in this article aims to refute this position by asserting that individuals should indeed have property rights over bitcoin.

Both Konrad Graf and Stephan Kinsella have multiple times expressed their views on bitcoin. They both can probably be called crypto enthusiasts who view cryptocurrencies as a potentially viable alternative to state-created, fiat money. For example, Graf says that "bitcoin is actually today a 'pure' global

a Pavel Slutskiy (pavel.slutsky@gmail.com) is an associate professor in communication management at the Faculty of Communication Arts, Chulalongkorn University, Bangkok. His research interests include political and legal philosophy of communication, communication theory, philosophy of language, cross-cultural communication, and strategic communication management. He is the author of *Communication and Libertarianism* (2021) and *Philosophical Foundations of Communication Studies: A Praxeological Approach* (2024).

commodity money, an unmediated monetary good" (Graf 2014, 66). Kinsella highlights that bitcoin's decentralized nature and its ability to facilitate transactions without intermediaries make it a powerful tool, especially in the context of libertarian ethics and property theory (Swann 2020; Breedlove 2024). Kinsella also emphasizes the importance of understanding the philosophical foundations of bitcoin, including its relationship to property rights, economics, and law.

At the same time, Graf and Kinsella insist that bitcoin does not fall under traditional concepts of property rights. They argue that bitcoin cannot be owned in the legal sense, because it is not a physical object and its ownership in a legal sense cannot be justified from the libertarian perspective. Kinsella posits that bitcoin cannot be owned, because individuals only own their own resources, and therefore, no one can own information (S. Kinsella 2021a). He emphasizes that property rights can only extend to physical objects that individuals can possess. Kinsella suggests that bitcoin ownership is instead more akin to a bundle of rights, such as the right to use, transfer, and exclude others from the cryptocurrency (S. Kinsella 2021b).

Kinsella planned to publish his views on the subject in the form of an article (S. Kinsella 2021a), but to the best of my knowledge, he has not yet done so, possibly because it is still a work in progress. Consequently, I will attempt to distill his views from the available blog posts and podcasts. I acknowledge that this approach might affect the accuracy of my account of his argument. Nonetheless, I will refer to these sources to develop my argument further.

I believe that the stance that bitcoins cannot be subject to legal ownership, which entails more than mere possession, is inconsistent with the libertarian theory of property rights, despite the fact that it may or may not be compatible with a libertarian legal system. In a society without a state monopoly on the provision of law and order, private law can vary significantly between libertarian communities, with some of them recognizing bitcoin ownership and some not. But I nonetheless contend that the argument that bitcoin can be owned is compatible with the libertarian understanding of property rights. I will also argue that the explanation that Graf and Kinsella offer for why property rights over crypto assets are not enforceable is flawed.

Overview of the Original Argument

Bitcoin is an important digital currency due to its decentralized nature, which allows for peer-to-peer transactions without intermediaries, and its utilization of blockchain technology, which ensures a secure, transparent, and immutable ledger of transactions. Bitcoin transactions can be more cost-efficient and faster than traditional methods, offering greater privacy since they do not contain personal information. With a maximum supply

of twenty-one million bitcoins, it has the advantage of being scarce, like commodity-based money, and some experts see it as a potential "digital gold" or safe haven asset.

Bitcoin has value due to its multifaceted functionality, including its potential as a long-term store of value, its limited supply, and its ability to function as a unit of exchange in a digital world. It can also be seen as encrypted energy due to its proof-of-work consensus mechanism, making it a potential alternative to central bank–controlled fiat money.

In this context, the question of the classification of bitcoin as an ownable resource is important because it concerns how it is treated as an asset and currency. Property rights generally are an essential concept that play a crucial role—they provide a legal framework for ownership, possession, and control over assets and resources.

To have property rights over something means owning it in a legal sense—that is, having the exclusive right to control it (S. Kinsella 2023, 13). This legal concept of ownership, understood as the right to control, is different from mere possession, which implies "the factual authority that a person exercises over a corporeal thing" (S. Kinsella 2023, 371, app. 1, 29–36). Elsewhere, Kinsella writes, "Property rights are best viewed as rights to exclude others from using a resource rather than a right to use; and the term property, to be precise, should be used to refer to the (ownership) relationship between a human owner and an object (scarce, conflictable resource), not to the owned material object itself. Thus, your car is not your 'property'; you have a property right in your car" (S. Kinsella 2023, 204). Kinsella presents an argument on why bitcoin cannot be owned, drawing upon fundamental principles of ownership, property rights, and the nature of information. His argument challenges traditional conceptions of ownership by highlighting the unique characteristics of digital assets like bitcoin that defy conventional ownership paradigms. Central to Kinsella's thesis is the distinction between owning physical, scarce resources and owning nonphysical, nonscarce information. He posits that true ownership entails control over scarce resources, a criterion that bitcoin, as a digital entity, fails to meet.

This logic is similar to the position of Wankum (which Kinsella also references): "Unlike traditional assets, Bitcoin as a digital asset, cannot be classified as property, because digital 'property' is a concept that paradoxically excludes itself. Digital 'things' do not exist, they are information. Therefore, one can never own the 'thing' itself. While one can be in possession of bitcoin and have complete control over it by being in control of the private key or seed that enables the initiation of bitcoin transactions, one can never own bitcoin" (Wankum 2023). This argument is linked to the philosophical foundations of ownership, emphasizing the role of scarcity in determining ownership rights. According to this logic, ownership is fundamentally about

controlling resources that are scarce and rivalrous, enabling individuals to use, possess, and exchange those resources. In the case of bitcoin, which exists as information on a decentralized network, it lacks the physicality and scarcity required for traditional ownership. Since bitcoin is a digital entity that exists as information on a ledger, it does not possess the features that traditional property rights are based upon.

It is also clear that Kinsella's perspective on bitcoin ownership is deeply rooted in his critique of intellectual property rights, in which he questions the validity of owning information and challenges the notion of intellectual property itself. His argument against owning bitcoin is a logical extension of his broader stance on intellectual property, asserting that ownership should be limited to tangible, scarce resources that can be controlled and exchanged.

The second argument that Kinsella and Graf both put forward deals with bitcoin theft or fraud and the challenges associated with punishing such actions due to the decentralized nature of cryptocurrency. They contend that penalizing bitcoin theft or fraud with the goal of recourse or restitution—to make the victim whole again—would necessitate reversing transactions on all ledgers, a task that is practically unfeasible given the distributed and immutable nature of blockchain technology. This argument stems from the core principles of bitcoin's design: transactions are recorded on a public ledger that is maintained by a network of nodes, making it extremely difficult to alter past transactions without widespread consensus (Graf 2015; S. Kinsella 2024).

Basically, this argument implies that in the context of blockchain technology, if one were seeking to retrieve something (such as bitcoin or another digital asset) through a court order, it would involve a complex process. This process would not only require a court order against the specific party one is dealing with but also against third parties who hold copies of the blockchain ledger. These third parties, who maintain local copies of the blockchain, would need to be involved in unwinding or reversing transactions to comply; besides, the order would also interfere with the third parties' exclusive control of their resources (computers or other devices). The decentralized nature of bitcoin, by which no single entity has control over the network, poses significant challenges when attempting to address issues of theft or fraud. Penalizing bitcoin theft would not only require coordination among all ledger holders but also raise questions about the authority to enforce such penalties in a decentralized environment existing in a private law society.

The Inconsistency of the Argument against Bitcoin Ownership

When I say that in my opinion the views outlined above are not necessarily wrong, but inconsistent, I refer to the inconsistency with the authors' own previously expressed positions. The entire argument that bitcoin cannot be owned is based on the premise that, as a digital asset, bitcoin falls into

the category of nonphysical assets—namely, information. Since information cannot (or rather, should not) be owned, according to libertarian views on property rights, it follows that bitcoin should not be owned either. The argument is built on the most simple logical syllogism—a categorical syllogism that follows the pattern "All A are B; C is A; therefore, C is B": "All information should not be subject to property rights claims; bitcoin is information; therefore, bitcoin should not be subject to property rights claims."

The main premise is based on Kinsella's important contribution to the intellectual property debate (which Graf also cites). Kinsella's criticism of intellectual property rests on the general concept of property rights as the device initially developed to solve potential conflicts caused by scarcity. This approach also has a long history within libertarian tradition, starting perhaps with Benjamin Tucker, who noted that in a world where physical scarcity exists, people inevitably compete for use, and this is exactly the problem which property rights resolve—the person who has the property title to this chair determines its use: "If it were possible, and if it had always been possible, for an unlimited number of individuals to use to an unlimited extent and in an unlimited number of places the same concrete thing at the same time, there would never have been any such thing as the institution of property" (Tucker 1994, 178).

Similar ideas were expressed by Hans-Hermann Hoppe: "To develop the concept of property, it is necessary for goods to be scarce, so that conflicts over the use of these goods can possibly arise. It is the function of property rights to avoid such possible clashes over the use of scarce resources by assigning rights of exclusive ownership. Property is thus a normative concept: a concept designed to make a conflict-free interaction possible by stipulating mutually binding rules of conduct (norms) regarding scarce resources" (Hoppe 2010, 18). The term *scarcity* refers to the possible existence of conflict over the use of a finite thing. "It means that a condition of contestable control exists for anything that cannot be simultaneously owned: my ownership and control excludes your control" (S. Kinsella 2023). In contrast to scarce resources, nonscarce goods are abundant—they exist in quantities which allow satisfaction of all demand. Examples of such nonscarce goods are things which can be replicated at zero cost, without new copies displacing the previous copies and with no decline in the quality of new copies compared to the originals.

A key element of theft is a violation of the owner's exclusive right to control his legitimate property by depriving him of it. This, however, does not happen when an item is reproduced and the original owner still keeps his copy intact. This is the reason why intellectual property should not enjoy

the same protection as scarce resources. In this case of ideas, there can be no conflict over ownership, and no norms assigning legitimate control and rights to these things are necessary:

> Were we in a Garden of Eden where land and other goods were in finitely abundant, there would be no scarcity and, therefore, no need for property rules; property concepts would be meaningless. The idea of conflict, and the idea of rights, would not even arise. For example, your taking my lawnmower would not really deprive me of it if I could conjure up another in the blink of an eye. Lawnmower-taking in these circumstances would not be "theft." Property rights are not applicable to things of infinite abundance, because there cannot be conflict over such things. . . . Like the magically-reproducible lawnmower, ideas are not scarce. . . . There is no economic scarcity, and no possibility of conflict over the use of a scarce resource. Thus, there is no need for exclusivity. . . . Similarly, if you copy a book I have written, I still have the original (tangible) book, and I also still "have" the pattern of words that constitute the book. Thus, authored works are not scarce in the same sense that a piece of land or a car are scarce. If you take my car, I no longer have it. But if you "take" a book-pattern and use it to make your own physical book, I still have my own copy. The same holds true for inventions and, indeed, for any "pattern" or information one generates or has. (N. S. Kinsella 2001, 22)

This insight has direct implications for any property right claims to information. Information is not a scarce resource, since it could be used by multiple people in multiple places simultaneously. This has been recognized by many libertarians before Kinsella as well. In an August 13, 1813, letter to Isaac McPherson, Thomas Jefferson (1905) famously acknowledged that the transfer of ideas is drastically different from the transfer of property titles in scarce resources:

> If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.

Benjamin Tucker (1994) in a similar context noted that intellectual property as a natural right runs counter to the very purpose for which the idea of property evolved—in fact, intellectual property creates scarcity where none naturally existed, thus creating an unnatural monopoly.

Kinsella's most interesting conclusion, however, takes Tucker's argument to the next level by stating that intellectual property runs counter to the purpose of the idea of property. Kinsella argues that intellectual property in fact is an example of property rights violation granted by government legislation. If I have a pen and a piece of paper, I can burn them, sell them, abandon them, or use them to write whatever I like—this is what property rights over pen and paper imply. But intellectual property would interfere with these rights to use the pen and paper that I own. Kinsella writes,

> IP rights give to pattern-creators partial rights of control—ownership—over the tangible property of everyone else. The pattern-creator has partial ownership of others' property, by virtue of his IP right, because he can prohibit them from performing certain actions with their own property. Author X, for example, can prohibit a third party, Y, from inscribing a certain pattern of words on Y's own blank pages with Y's own ink.
>
> That is, by merely authoring an original expression of ideas, by merely thinking of and recording some original pattern of information, or by finding a new way to use his own property (recipe), the IP creator instantly, magically becomes a partial owner of others' property. He has some say over how third parties can use their property. IP rights change the status quo by redistributing property from individuals of one class (tangible-property owners) to individuals of another (authors and inventors). Prima facie, therefore, IP law trespasses against or "takes" the property of tangible property owners, by transferring partial ownership to authors and inventors. It is this invasion and redistribution of property that must be justified in order for IP rights to be valid. (N. S. Kinsella 2001, 25)

Bitcoin and Scarcity

I need to explicitly state that I completely agree with and support Kinsella's views on intellectual property rights and also believe that ideas are not ownable. However, I do not agree that this logic is applicable to bitcoin.

The starting point for the argument about the applicability of property rights to bitcoin should not be the physical status of the object in question; instead, it should be scarcity. As Hoppe notes in the quote above, "To develop the concept of property, it is necessary for goods to be scarce, so that conflicts over the use of these goods can possibly arise."

The term *scarcity*, we recall, refers to the possibility of disputes over the allocation of a limited resource. Specifically, if something is scarce, it implies that there is a situation of disputed ownership, where one person's ownership and control of the resource prevents another person's control. On the other hand, nonscarce goods are abundant and plentiful, meaning that they can be used to meet all demand without any competition or conflict. A characteristic of nonscarce goods is that they can be replicated at no cost, without the new copies replacing the original and with no decrease in quality. Theft, in essence, involves infringing on the exclusive right of owners to control their legitimate property by taking it away from them.

As we can see, scarcity refers not to the physical nature of the asset but to the possible existence of conflict over the use of a finite thing, where ownership and control of a resource by one person excludes the control of another person. Nonscarce goods, on the other hand, are abundant and exist in quantities that can satisfy all demand. Were it not for scarcity of goods, there would be no reason for property rights to arise.

Another term that is used to denote the more specific sense of scarcity that is most essential to reasoning about property theory is *rivalry*. Graf cites Rothbard in his clarification of the subtle difference between scarcity and rivalry or rivalness:

> The word scarce can also be viewed as implied within the definition of what an economic good is. In that case, scarce could not distinguish some types of goods from others. In this view, goods are either "scarce" by definition or are not "goods" with respect to action, but mere background conditions of action (Rothbard 2009, 8). In shifting to property rights theory, something narrower would be useful to distinguish which types of goods should be considered ownable and which not. It is rivalness in particular that best distinguishes goods that qualify as ownable. This emerges most clearly in deconstructing the grounds for IP rights and in considering the phenomenon of artificial scarcity. (Graf 2015, 57)

A rival good is defined as an item that cannot be used simultaneously by multiple parties for different, conflicting purposes without causing a physical clash. These goods are typically tangible items that cannot be directly replicated; each must be individually manufactured. In contrast, a nonrival good, such as an idea, technique, or digital file, can be freely duplicated or replicated. Additionally, each of these copies or instances can be used concurrently in different applications without any direct interference. This classification underscores the concept of rivalry in the context of goods: "Rival goods, property theory, and artificial scarcity descriptive relationship between the nature of certain types of goods and their objective employability when used in a social context" (Graf 2015, 56).

Although using physical properties to gauge rivalry has traditionally been an effective heuristic, it falls short when applied to bitcoin, which presents a new paradigm for how an economic asset can exhibit rivalry. Bitcoin qualifies as a rivalrous good, not through physical or spatial traits but due to its cryptographic and network attributes that are essential to its nature. Normally, rivalry is derived from the physical and chemical properties inherent to specific objects. This nuance highlights bitcoin's role as a significant innovation, the full impact of which may be difficult to appreciate.

Graf also recognizes this, although he does not see the logical consequences of it for the question of bitcoin ownership:

> It should be emphasized that buying a bitcoin is not like buying other digital goods, such as a copy of a song file. One does not buy a "copy" of a bitcoin, but a bitcoin itself. A bitcoin seller no longer possesses the bitcoin in question after the sale (and contextually sufficient confirmations). When one buys (a copy of) a song file, in contrast, the possessor retains copies from which to make more copies. . . . A bitcoin cannot be copied in any such way. It is rival in the same sense as a physical object or spatial location. In addition, a bitcoin cannot be sufficiently described as "just a ledger entry" because a ledger entry records something. This formulation does not explain what it is that is recorded. From a unit perspective, bitcoins function as a digital monetary commodity according to strict economic theory definitions. (Graf 2015, 73–74)

Based on this interpretation, bitcoin should be classified as a scarce, rivalrous resource. Bitcoin has a finite supply of twenty-one million coins. It cannot be simultaneously owned or controlled by multiple individuals due to its nature as a digital asset that is based on a decentralized blockchain network. The ownership of bitcoin is established through the possession of private keys, which allow for the control and transfer of bitcoin. This means that there is a potential for conflict over the use of bitcoin, since its ownership and control by one person excludes the control of another person. This is reinforced by the scarcity principle, which is a cornerstone of bitcoin's network and its policy of adhering to stringent regulations and controls.

Additionally (although it is not a critical argument and may be contestable), the bitcoin stock-to-flow model argues that bitcoin can be valued as a scarce resource because it contains "unforgeable costliness," requiring significant resources to mine and produce. This reinforces the idea that bitcoin is a scarce resource due to its limited supply and the costs associated with producing new coins. In contrast, nonscarce goods are abundant and exist in quantities that can satisfy all demand—they can be replicated at zero cost, without new copies displacing the previous and with no decline in the quality of

new copies compared to the original. As we can see, bitcoin does not fit this definition of nonscarce goods, because it has a finite supply and requires significant resources to mine and produce new coins.

Bitcoin differs significantly from tangible assets, like ideas in a book, since taking bitcoin from one person means that the original owner no longer has possession of it. This characteristic of bitcoin makes it a scarce resource—again, due to its limited supply and the potential for conflict over its use. Bitcoin, like other scarce resources, is rivalrous, meaning that its use by one individual excludes others from using it simultaneously.

By Kinsella's own logic, this is exactly the condition that gives rise to the development of property rights—to avoid conflicts, property rights are assigned to establish exclusive ownership. Bitcoin's finite supply and the potential for disputes over its use make it a valuable asset that can be classified as a scarce resource, subject to property rights to prevent conflicts and ensure fair use.

I think the fundamental mistake that Kinsella makes is to conceptualize bitcoin as "just entries in a ledger" (S. Kinsella 2021a). He says that "the ledger is just information stored on 10,000 private computers around the world, a bunch of different hard drives, and they're all owned by different people or companies." From there he concludes that "if I owned a Bitcoin, that would mean I own the pattern of information that's stored on other people's computers. That would mean I have a property right in their computers, but I don't have a property right in their computers."

The logic is flawed—while bitcoin transactions are recorded on a blockchain, which acts as a distributed ledger system, bitcoin itself is not "just entries in a ledger." It is a digital currency that operates on this ledger. The blockchain records all bitcoin transactions, ensuring transparency and security, but bitcoin is more than just a ledger record. It is a decentralized digital currency that can be transferred and used for various transactions, distinct from the ledger system that tracks these transactions. As Graf puts it in the quote cited above, "from a unit perspective, bitcoins function as a digital monetary commodity according to strict economic theory definitions" (Graf 2015, 74).

A helpful analogy to distinguish between bitcoin and a ledger record is to liken bitcoin to fiat currency stored on a debit card, while the ledger record is comparable to a detailed transaction history or bank statement. Just as money on a card represents a tangible form of value that can be physically held and utilized for transactions, bitcoin functions as a digital currency that can be traded for goods and services. Conversely, the ledger record, much like a bank statement, tracks all bitcoin transactions, guaranteeing transparency and precision.

Although we know that bitcoin control is established through the possession of private keys, which allow for access to and transfer of bitcoin, the possession of private keys does not automatically establish legal ownership, since ownership is determined by the legal framework governing the use and transfer of bitcoin.

So, should such a legal framework be developed in a libertarian legal order? I would say yes, since to develop the concept of property, it is necessary for goods to be scarce and rivalrous so that conflicts over the use of these goods can possibly arise. Bitcoin is a scarce, rivalrous resource due to its finite supply and the potential for conflict over its use, making it a suitable candidate for property rights.

Property rights are normative concepts that are designed to make a conflict-free interaction possible by stipulating mutually binding rules of conduct (norms) regarding scarce resources. This is why the concept of property is important for bitcoin: it helps to avoid possible clashes over the use of the scarce resource by assigning rights of exclusive ownership.

The Theft Argument

Now, we shall move to the second part of the argument, which deals with bitcoin theft and the challenges associated with penalizing such actions due to the cryptocurrency's decentralized nature. We recall that the argument against bitcoin ownership suggests that penalizing bitcoin theft would necessitate reversing transactions on all ledgers—a task that is practically unfeasible given the distributed and immutable nature of blockchain technology.

This argument is grounded in the fundamental design principles of bitcoin, which features a public transaction ledger maintained by a decentralized network of nodes, making it highly resistant to alteration without consensus. The distributed nature of bitcoin involves the circulation of approximately ten thousand or more copies of this ledger across various nodes worldwide, with periodic updates every ten minutes to reflect the creation and transfer of new bitcoins. At its core, bitcoin is essentially a ledger record, which is a type of information, and a bitcoin is merely an entry within this extensive, decentralized ledger, which is replicated and stored on numerous computers across the globe.

The digital and decentralized nature of bitcoin presents unique challenges in cases of theft or restitution. In discussing the complexities of legally mandated bitcoin returns, Kinsella points out that the restitution process for stolen bitcoins can be particularly problematic, especially when the cryptocurrency has been mixed or transferred multiple times. Determining ownership and distributing recovered bitcoins can thus prove to be difficult tasks.

To illustrate this position, Kinsella contemplates the scenario where a seller defrauds a buyer of bitcoin and considers the implications of ownership and restitution. Kinsella is not in principle opposed to a court order directed at the defrauding seller, who could be compelled to transfer the bitcoin back to the victim. However, this assumes that the seller has not already spent the bitcoin in question. But if the seller has not spent the bitcoin, then it is reasonable to force the seller to transfer it back to the victim as a form of restitution. This is not because the seller "owns" the bitcoin but because it is a reasonable way to hold the seller accountable and provide restitution to the victim.

In Kinsella's analysis, the situation changes if the stolen bitcoin has already been spent—here, I suppose Kinsella would invoke his "existence condition." When discussing future-oriented contracts, Kinsella highlights that the successful transfer of title depends on the item's existence at the time specified for the transfer. He states, "Failure to transfer something that does not exist cannot be theft; rather, one of the conditions for the title transfer has simply not been satisfied" (S. Kinsella 2023). This concept can be extended to Kinsella's argument that bitcoin cannot be owned, and therefore, it cannot be stolen. And once bitcoin is spent, it cannot be returned to the original owner, since it is merely an entry in a distributed ledger system. Consequently, the question arises, How can there be theft of a nonexistent entity?

To me, this logic does not look very convincing. Even if a stolen item cannot or can no longer be returned, the theft still occurred. As mentioned elsewhere, "A steals a wristwatch from B, and then accidentally loses it and has no money to compensate for the stolen item, is he off the hook simply because the watch is no longer in his possession, and thus has no legal accountability? Should the legal system let him go?" (Slutskiy 2021).

Kinsella asserts that one does not "own" bitcoin in the traditional sense, since it would be challenging to obtain a court order to return stolen bitcoin. Such a return would require unwinding the local blockchain copies of third parties, which is not feasible (S. Kinsella 2024). Since bitcoin consists of a large number of ledger entries, it cannot be returned without compelling all computer owners to reverse the transaction. This is not only technically impossible but would also constitute a trespass—a violation of the property rights of those computer owners.

Similarly, Graf (2015, 34–39) exerts considerable effort to argue that the primary function of property rights is to enable the owner to recover an item that was once owned and stolen, even from a good-faith third-party possessor. However, in the case of bitcoin, neither the owner nor law enforcers can compel everyone in the BTC network—miners, node runners—to "roll back" their local copies of the blockchain to "undo" the transfers of the stolen bitcoins. Therefore, stolen bitcoins cannot be returned to the original owner's control, which leads to the argument that bitcoins cannot be owned.

This seems to introduce a new criterion for something to be ownable: the item in question must be potentially retrievable from an illegitimate possessor and returnable to the legitimate owner. However, this has no analogy in the world of physical assets. Indeed, it is true for a car or a watch: if stolen, the owner can recover the item even from a good-faith third-party possessor. But consider another example—say, a bottle of bourbon: if a thief breaks into my house and steals a bottle of bourbon, he may either drink it himself or sell it to a good-faith third party who then drinks it. In either case, the bourbon cannot be returned to me because it has been absorbed into the digestive system of the person who consumed it without my consent. Does this mean I never owned that bottle of bourbon?

If someone steals my food and consumes it, the food cannot be returned to me, the original owner, but that does not mean the food had not been owned by me or that the theft is inconsequential. The crime still occurred, and any sensible legal system would recognize that such a crime is punishable—whether for the purposes of restitution, retribution, or deterrence.

In a similar vein, even if a thief spends the stolen bitcoin, and it gets dispersed in multiple ongoing transactions, this implies that the stolen bitcoin cannot be returned—but it does not mean that it was never owned. The fact that an item is nonretrievable does not equate to its being nonownable.

Let us go back to the concern that recognizing property rights over bitcoin might infringe on existing property rights, such as those involving computers and hard drives that store the ledger. More specifically, if the law recognizes property rights over bitcoin and B "steals" A's bitcoins, can A require all the participants in the BTC network—miners, node runners—to "roll back" their local copies of the blockchain to "undo" the transfers of A's bitcoins, effectively restoring them to his control? Both Graf and Kinsella would say no; since node operators and miners own their own computer hardware and have the right to manage the blockchain data on their devices as they see fit.

Kinsella also argues that returning stolen bitcoin would require unwinding the local blockchain copies of third parties, which is not only infeasible but also immoral and unjustified since it would imply forcing innocent miners or node operators to change the memory status of their computers. But this argument does not hold water in my opinion either. Innocent miners or node operators will not be forced to do anything—only the thief or a current illegitimate possessor will be compelled to transfer the stolen bitcoin back to the original owner, and the blockchain will record the transaction.

Furthermore, returning to the stolen bourbon example—the fact that I am the original owner does not grant me the right to infringe upon the bodily property rights of a third party who unknowingly drank it to retrieve the bourbon's molecules. Similarly, just because stolen bitcoin is dispersed and

the records of its movement are spread across the distributed ledger does not give me the right to infringe on the property rights of the owners of the hard drives where the ledger is stored. But many goods, once stolen and used according to their nature, cannot be returned to their owner—does this mean they were not owned initially? If A owns a tank full of gasoline, and B steals it and sells it to unknowing car owners, does this imply that gasoline cannot be owned?

Another argument hinges on the critical notion that most bitcoin transactions are not entirely pseudonymous. Bitcoin exhibits fungibility yet also maintains some unit traceability; transactions are indeed traceable. To go back to the car example, if A's car is stolen by B and sold to C, and A can locate both the car and C, A may, in principle, force C to return the car. By the same logic, if A's bitcoin is stolen by B and transferred to C, D, and E, and if C, D, and E can be identified and located, there is no reason why A should not, in principle, be able to compel C, D, and E to return the stolen bitcoin to him. However, as Graf notes, "The likely solution in these cases, where the practical identifiability of the stolen goods rapidly degrades with each subsequent transfer, is to restrict legal recourse directly between A and B, and possibly C" (Graf 2015, 54). Perhaps in some cases, stolen bitcoin will be more like a stolen car (potentially returnable), and in others, more like stolen gasoline (nonreturnable). However, I do not see why this would render it unownable in a legal sense.

Finally, the same analogy, which we used previously, can be made between the money on a debit card and bitcoin, since both are essentially information or data that represents value. In the case of a debit card, the information is stored on a computer system and can be accessed using a card and a PIN. If someone steals this information and uses it to make unauthorized transactions, it is considered theft by any sensible legal standard.

Similarly, bitcoin is a digital currency that exists as a decentralized ledger on a network of computers. The information representing the ownership and transfer of bitcoin is stored on this ledger, and anyone with the private key can access and transfer the bitcoin. If someone steals this private key and transfers the bitcoin to another account, it can be considered theft, just like in the case of a debit card.

The fact that bitcoin is not a tangible asset and exists only in digital form does not change its status as a scarce, rivalrous resource that can be stolen. The legal system therefore should treat the theft of bitcoin in the same way as the theft of any other scarce resource, such as money or tangible assets. This would also be consistent with Graf's understanding of the nature of bitcoin as "a 'pure' global commodity money, an unmediated monetary good" (Graf 2014, 66).

Although the decentralized and pseudonymous nature of bitcoin can make it more challenging to trace and recover stolen funds for the purpose of restitution, this does not mean that the theft should not be treated as a criminal offense. The legal system should adapt to the unique challenges posed by digital currencies and ensure that the rights of the victims are protected.

The Implications of Recognizing Property Rights over Bitcoin

But why does it even matter? Both Kinsella and Graf argue that there is no need to establish property rights over bitcoin—punishing a thief for stealing bitcoin does not necessitate establishing property rights over it. The pseudonymous nature of the bitcoin system means there are no explicit terms of service, and scenarios like guessing someone's private key to transfer their bitcoins to another account may not constitute theft under the system's rules. Because the possibility of guessing a private key is highly improbable, actual theft of bitcoin would entail trespassing into someone's computer or home to obtain the private key, which is already a crime. Therefore, there is no need to treat it as a double offense by penalizing both the trespass and the theft of bitcoin (S. Kinsella 2024).

In my opinion, this situation would indeed constitute a double crime: the thief should be held accountable for both trespassing into someone's computer or home and the theft of a scarce resource, which is bitcoin. The fact that the bitcoin may no longer be in the possession of the thief or that it may not exist at all is irrelevant, since the act of theft has already occurred. The legal system should recognize this act as a punishable offense or convert it into a monetary obligation to pay damages. This approach would ensure that the thief is held accountable and that the victim is compensated.

From this perspective, however, it seems like there is indeed no practical difference between the "bitcoin ownership" system and the "bitcoin may not be owned" system. If the bitcoin is stolen via a trespass—such as physically breaking into someone's home to steal bitcoin keys, hacking into a computer system to do the same, etc.—then the thief should be punished and the victim compensated, with the compensation measured by the value of the bitcoins lost or taken (Graf 2015, 28). Then, calculating the consequent loss in value does not depend solely on whether every item affected is ownable. What would be essential, according to Graf (30) is that the loss in value can be directly linked to actions that infringed upon a legitimate property right of the victim concerning something that can be owned, which then resulted in a specific total estimated impact on this victim. In such scenarios, the question whether bitcoin is ownable seems irrelevant in practical terms.

So why, then, does it matter whether bitcoin is owned or not? Ownership becomes crucial in cases where bitcoin is stolen without any accompanying criminal act. For example, suppose A carelessly writes his keys on a piece of

paper and leaves it on a table. B, across the street, uses a telescope to see the keys. He obtains the keys without committing trespass or breaching a contract, and then transfers the bitcoin to his own wallet. If bitcoin is not considered legally owned, then B commits no crime.

However, if property rights over bitcoin are legally recognized, this transfer would be considered an interference with the legitimate property rights of A by B, without A's consent (which constitutes theft). A would then be entitled to compel B to return the stolen bitcoin. If B has used it and transferred it to unknowing third parties C, D, and E, and if these parties are identifiable, they can be compelled to transfer parts of the stolen bitcoin back to the legitimate owner A, similar to how an innocent third party who bought a stolen car would be forced to return it to its rightful owner. If the stolen bitcoin is lost and cannot be found, the thief may still be held liable to pay compensation equal to the value of the stolen bitcoins.

This is the main difference between my position and Graf's and Kinsella's. If I understand them correctly, they argue that because bitcoin is pseudonymous and lacks terms of service, anyone who possesses the keys can make transactions, regardless of how those keys were acquired. They suggest that guessing someone's keys and using them does not violate any rights, highlighting a crucial distinction from traditional theft. They compare this to using stolen ID to access and withdraw money from someone's bank account, which involves both trespassing and violating terms of service.

However, I disagree with their view. Even if the bitcoin protocol does not explicitly forbid such actions within its terms of service, it highlights the need for legally recognized property rights over bitcoin. Such recognition would ensure that bitcoin theft is identified as a legal violation—specifically, interference with the exclusive control over an asset without the legitimate owner's consent. This would be consistent with Kinsella's own views, according to which "the law should prohibit aggression. Because aggression is a particular kind of human action—action that intentionally violates or threatens to violate the physical integrity of another person or another person's property without that person's consent" (S. Kinsella 2023, 168).

It should be irrelevant how access to the keys was obtained—whether the thief guessed the password, trespassed to discover it, or coerced the owner into revealing it. While the latter two scenarios are clear crimes of trespass and extortion, they should, when resulting in the unauthorized transfer of bitcoin, also be recognized legally as theft.

Conclusion

Technological progress has the ability to create entirely new things or endow existing entities with new properties. This is what happened with the development of blockchain technology. It enabled something loosely defined

as information, historically a nonscarce resource, to become scarce. The technologically determined nature of bitcoin makes it a scarce, rivalrous resource.

Property rights are a legal concept. Unlike the concept of possession, which refers to the relationship between people and objects, property rights refer to the legal relationships between people. As Kozinski notes, "property rights are, of course, a species of relationships between people. At the minimum, they define the degree to which individuals may exclude other individuals from the use and enjoyment of their goods and services" (Kozinski 1990).

In a private law society, several competing legal systems would likely coexist in the absence of a state monopoly on the provision of law and order. However, property rights over scarce resources would still exist, allocated according to principles of self-ownership, original appropriation, and contract.

The difference would be in the recognition of different assets as scarce resources. I can believe that some of those private law systems would recognize property rights over bitcoin and some would not. The implications of these different approaches could influence contract law, especially regarding the transfer of property rights, as well as tort and criminal law, with issues like bitcoin fraud and theft being particularly affected. Some private law systems would see bitcoin as a scarce, conflictable resource over which property rights can be established. Others would see bitcoin as "information" and in the absence of property rights over information would not recognize the ownership of bitcoin.

In the latter case, where the ownership of bitcoin is not recognized but bitcoin is still used and becomes money, people, according to Kinsella, will find ways to structure their contracts and arrangements to deal with cases of theft, contract "breach," and fraud. I agree that this would inevitably happen under such a legal arrangement. As Kinsella says, "We cannot predict how a just legal system of a private property order would look exactly since the state's interventions prevent and block innovation that would undoubtedly happen under a libertarian legal order" (S. Kinsella 2024).

In the world of private law, there may also exist alternative systems that in contrast would recognize bitcoin as an ownable, scarce resource. Now, if I happen to own any bitcoin in such a private law society, where bitcoin functions as money, I would likely choose to voluntarily opt for a private law system that recognizes property rights over bitcoin. Furthermore, if bitcoin is widely recognized as money in such a private law society (that is, recognized as an item or verifiable record generally accepted as payment for goods and services and repayment of debts in a particular socioeconomic context), then most bitcoin users and holders would probably prefer to have their ownership claims legally recognized and protected.

Therefore, I think that a private law system that recognizes the ownership of bitcoin would be likely to outcompete the alternative "Kinsella law system" that does not recognize property rights over bitcoin. However, I can also imagine a situation where people would find other ways to work around this issue and use bitcoin as money without worrying about whether bitcoin is or is not an ownable thing.

Submitted: April 22, 2024 CST. Accepted: July 14, 2024 CST. Published: September 20, 2024 CST.

REFERENCES

Breedlove, Robert. 2024. "Legal Foundations of a Free Society with Stephan Kinsella (WiM430)." *The "What Is Money?" Show*, February 3, 2024. YouTube video, 81 minutes. https://youtu.be/lR4n-xNOgDs.

Graf, Konrad S. 2014. "Commodity, Scarcity, and Monetary Value Theory in Light of Bitcoin." *Prices and Markets* 3 (3): 55–69. https://api.semanticscholar.org/CorpusID:55980981.

———. 2015. *Are Bitcoins Ownable? Property Rights, IP Wrongs, and Legal-Theory Implications*. Self-published, CreateSpace.

Hoppe, Hans-Hermann. 2010. *A Theory of Socialism and Capitalism*. Auburn, Ala.: Ludwig von Mises Institute. https://mises.org/library/book/theory-socialism-and-capitalism.

Jefferson, Thomas. 1905. *The Writings of Thomas Jefferson*. Edited by Andrew A. Lipscomb and Albert Ellery Bergh. Vol. 13. Washington, D.C.: Thomas Jefferson Memorial Association.

Kinsella, N. Stephan. 2001. "Against Intellectual Property." *Journal of Libertarian Studies* 15 (2): 1–53. https://mises.org/journal-libertarian-studies/against-intellectual-property.

Kinsella, Stephan. 2021a. "Nobody Owns Bitcoin." *Stephan Kinsella* (blog), April 21, 2021. https://www.stephankinsella.com/2021/04/nobody-owns-bitcoin/.

———. 2021b. "You Don't Own Bitcoin—Property Rights, Praxeology and the Foundations of Private Law." *Join the Wasabikas: A Bitcoin Privacy Podcast*, May 26, 2021. YouTube video, 85 minutes. https://www.youtube.com/watch?v=1oaRl4H5vt8.

———. 2023. *Legal Foundations of a Free Society*. Houston: Papinian Press.

———. 2024. "Libertarian Answer Man: Bitcoin and Fraud." *Stephan Kinsella* (blog), March 14, 2024. https://www.stephankinsella.com/2024/03/libertarian-answer-man-bitcoin-and-fraud/.

Kozinski, Alex. 1990. "Of Profligacy, Piracy, and Private Property." *Harvard Journal of Law and Public Policy* 13 (1): 17–21. https://perma.cc/Z8AD-634V.

Rothbard, Murray N. 2009. *Man, Economy, and State with Power and Market*. 2nd scholar's ed. Auburn, Ala.: Ludwig von Mises Institute. https://mises.org/library/book/man-economy-and-state-power-and-market.

Slutskiy, Pavel. 2021. *Communication and Libertarianism*. Singapore: Springer. https://doi.org/10.1007/978-981-33-6664-0.

Swann, Guy. 2020. "Chat #46 – Stephan Kinsella on Intellectual Property in the Age of Bitcoin." *Bitcoin Audible*, September 7, 2020. Podcast, MP3 audio, 100 minutes. https://bitcoinaudible.com/podcast/chat-46-stephan-kinsella-on-intellectual-property-in-the-age-of-bitcoin/.

Tucker, Benjamin. 1994. "The Attitude of Anarchism toward Industrial Combinations." In *The Individualist Anarchists: An Anthology of Liberty 1881–1908*, edited by Frank H. Brooks, 190–202. New Brunswick, N.J.: Transaction.

Wankum, Leon. 2023. "Bitcoin Is a Possession, Not Property." *Bitcoin Magazine*, October 2, 2023. https://bitcoinmagazine.com/culture/bitcoin-is-a-possession-not-property.