

# The doge worth 88 billion dollars: A case study of Dogecoin

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## Abstract

In the modern financial system, the ability to create money is in the hands of a few central institutions. Blockchain networks, and by extension cryptocurrencies, were created with the promise of giving that power to users. The most well-known example of a blockchain technology achieving such decentralization is Bitcoin, but its popularity has arguably been matched by an alternative-currency named Dogecoin. Unlike other cryptocurrencies, which have marketed themselves on differentiating technical features, Dogecoin's allure likely stems from its cultural roots as a meme. Where cryptocurrency is typically regarded as a difficult topic to grasp, the introduction of Doge's (2013) most popular meme, into the crypto-space increased crypto's accessibility to new participants. Consequently, Dogecoin exists in two economies: the financial economy and the cultural meme economy, with the latter having unprecedented tangible impacts on the former. Dogecoin's unique cultural significance provides an example of how blockchain can succeed in promoting alternative money systems. At its peak in 2021, Dogecoin achieved a market capitalization of \$88 billion. Where analysis of the Dogecoin phenomenon is lacking in the current literature, we will fill that gap with a case study of Dogecoin. By studying Dogecoin as a combination of money and meme, we can further our understanding of how to better promote social finance initiatives through the virality of memes.

## Keywords

Alt-currency, bets, bitcoin, blockchain, cryptocurrency, digital currency, digital meme, Dogecoin, doge, meme, meme economy, meme finance, meme value, r/wallstreetbets, wall street social finance

## Introduction

Blockchain networks, first introduced in 2008 by Satoshi Nakamoto's Bitcoin (2008: 2–8), produced the potential for a new network paradigm built on the promise of democratizing consensus-creation,

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thereby evolving how we conceptualize money systems. Unlike the dominant network paradigm of the time, blockchain's computing power and decision-making ability are not solely dependent on a single centralized entity, but instead distributed to every user on the network. Recognizing the prospective changes that blockchain networks could make to the organization of the internet and wider society, several major blockchain platforms emerged, each pushing their own developments in the field.<sup>1</sup>

One of these developments was the creation of cryptocurrencies, currency that is created by its users rather than a central bank or another authoritative institution (Bambara and Allen, 2018: 33–34; Greenfield, 2017: 117–119; Nakamoto, 2008: 1). Cryptocurrencies were essential to the development of blockchain, so much so that the terms are (mistakenly) synonymous with one another. Bitcoin was the first cryptocurrency and was introduced as a direct alternative to our '[reliance] almost exclusively on financial institutions serving as trusted third parties to process electronic payments' (Nakamoto, 2008: 1).<sup>2</sup>

Alongside the crypto-giants, many alt-currencies,<sup>3</sup> defined by their smaller user-bases and niche functionality (Gandal and Halaburda, 2016: 2–3), also found success. One of them in particular, Dogecoin,<sup>4</sup> drew interest for its unorthodox origins in meme culture. While the discourse around blockchain centred primarily around investing (Gurdus, 2020; Lam, 2020; Nagarajan, 2020), Dogecoin's departure from a strictly financial focus to one that was founded on meme culture contributed to its perception as a 'joke' currency in popular business media (Hackett, 2020; Jeong, 2017: 58). However, Dogecoin's prolonged success suggests that it is a legitimate phenomenon deserving of analysis.

In 2013, Dogecoin became the second-highest searched cryptocurrency on Google, behind only Bitcoin (McGuire, 2013). By early 2018, Dogecoin's market capitalization, the value of all Dogecoins combined, of two billion American dollars (Friedman, 2018).<sup>5</sup> In 2021, another internet-fuelled price spike saw the market capitalization of Dogecoin reach above \$88 billion, with each individual DOGE priced above 70 cents. While Dogecoin has experienced some volatility since then, its unique blend of culture and crypto make it an interesting case study. Unlike other cryptocurrencies, it exists firmly in both the meme economy and financial economy, a duality that has yet to be fully explored. The academic literature on Dogecoin is scarce and primarily focused on either the blockchain's coding infrastructure (Teutsch et al., 2019; Herrigan et al., 2018) or financial metrics (Chohan, 2017; Huang et al., 2018), with only a passing mention of its cultural value. Similarly, the literature on memes has not yet discussed the Dogecoin phenomenon.

In this article, we will fill that gap. Firstly, we will analyse the general workings of a blockchain and the history of Dogecoin to understand its origins and functionality. Next, we will summarize the budding literatures of memes and social finance to help us situate Dogecoin within those constructs. We will then analyse the Dogecoin phenomenon as a meme, as money and as a unique blend of the two. Finally, we will assess the unique impact of Dogecoin on the future of blockchain and social finance.

## *The Dog behind the Doge*

Understanding Dogecoin requires a deeper look at the history of its foundational meme. The Doge meme, or simply 'Doge', was first conceived in February of 2010 when Japanese blogger Atsuko Sato posted a picture of her dog, a Shiba Inu named Kabosu, in one of her blog posts (Jeong, 2017: 58).<sup>6</sup> A few months later in October, an unrelated photo of another Shiba Inu went viral on Reddit, an extremely popular internet forum, with the word 'dog' misspelled as 'doge' in its title (Esteves and Meikle, 2015: 564; Chayka, 2013). This evolved into the intentional misspelling of words in the

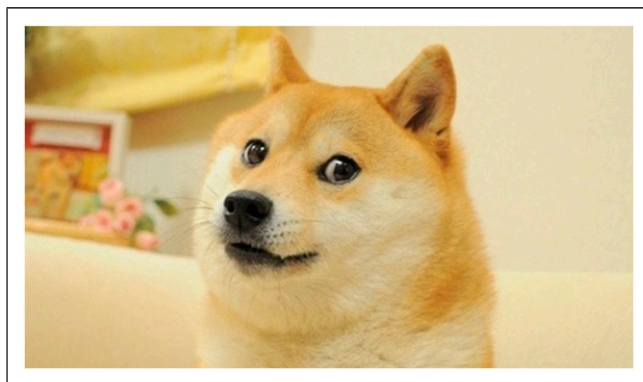
comic sans font placed atop pictures of Shiba Inu dogs, which first appeared in a Tumblr thread called 'Shiba Confessions' in September 2012 (Chayka, 2013). It was not until Sato's photo of Kabosu was used in the thread in July 2013 that Doge finally went viral [Figure 1].

For the next year, Doge became a central cultural icon, becoming so widely recognized that corporations started using the meme in their advertising (Bury, 2016: 36). Doge's brand recognition eventually inspired marketer Jackson Palmer and software developer Billy Markus to create a cryptocurrency based on the meme and named it Dogecoin. The infrastructure of the Dogecoin blockchain is not particularly innovative;<sup>7</sup> there are few, if any unique technical qualities that set Dogecoin apart from other cryptocurrencies. Yet, Dogecoin experienced an unprecedented amount of success for an alt-coin, primarily because its origins as a meme made it more marketable and culturally accessible than technically driven cryptocurrencies (Chohan, 2017: 2; McGuire, 2013). True to its meme roots, Dogecoin's logo featured a coin with Doge branded on its face [Figure 2].

Dogecoin's first notable achievement arguably came in 2014 when it was used to raise \$30,000 as part of a crowdfunding effort to send the Jamaican two-man bobsled team to the Sochi Olympics, an amount that constituted roughly 20% of the total raised (Jeong, 2017: 54). This fundraising effort was evidence that the Dogecoin community was more than just a collection of blockchain enthusiasts attempting to entertain themselves; they had created their own usable money without a central authority. Most of Dogecoin's transactions occurred as a result of users tipping each other for quality content on Reddit, a significant boon to its popularity (Mashiach, 2020; Jeong, 2017: 60). Even more notably, Dogecoin's value became independent from that of other cryptocurrencies, rising at points even while the rest of the crypto-market was crashing (McGuire, 2013).

After an eventful 2014, Palmer and Markus decided to put an end to their project in 2015, stating that Dogecoin would not be receiving software updates moving forward, although the blockchain would still remain operational (Palmer, 2018). Without active support, it was expected that Dogecoin would die out. However, in 2018, Dogecoin achieved a market capitalization of two billion dollars (Friedman, 2018).

In February 2021, Dogecoin experienced another renaissance, this time initiated by a substantial \$1.5 billion investment from Tesla CEO and technology mogul Elon Musk (Wells, 2021). This investment alone approximately quintupled the value of Dogecoin and sustained a steady rise in price until April, where further celebrity support and the r/wallstreetbets movement ignited a meteoric rise in DOGE price from \$0.07 to \$0.74 (Rivers, 2021).<sup>8</sup> At its peak in May, Dogecoin



**Figure 1.** A blank doge meme template.



**Figure 2.** The Dogecoin logo.

achieved a market capitalization of \$88 billion. Though DOGE stabilized to prices between \$0.25 and \$0.20 in July 2021, this still represents overall growth from before the involvement of r/wallstreetbets. Even seven years since its last update, Dogecoin has seen frequent use and activity among investors and the internet community.<sup>9</sup>

### *Democratizing money*

The motive behind the creation of cryptocurrencies, and by extension blockchain networks, was to provide an alternative to administering financial transactions that did not involve centralized financial institutions (Nakamoto, 2008: 1). The Bitcoin blockchain was the first to successfully achieve this task by creating a ‘trust-less’ system where third-party intermediaries were no longer needed to verify transactions, thus keeping user information more private (2008: 1–2). Inevitably, this involves changing how we conceptualize money; relieving central banks of their role as an authenticator shifts that responsibility onto another party. In the case of blockchain networks, administrative power is distributed among *all* users of a respective blockchain through their computers, which are called ‘nodes’ (Bambara and Allen, 2018: 4–5).

The term ‘blockchain’ refers to a network of computers where the authority and operational capacities of the system are distributed among every node in that network. This contrasts status quo institutions such as banks, where one central governing body controls the operations of an entire system. Rather than trusting one authoritative entity to operate the entire financial infrastructure, control of a blockchain is distributed to any party currently using the network through a ‘distributed trust protocol’ (Tapscott and Tapscott, 2018: 5). Therefore, all actions that occur on a blockchain network have been universally verified by all nodes on the network.

Cryptocurrencies<sup>10</sup> are digital currencies created and traded on a blockchain network. Fiat currencies, regulated by a central bank, function because of an implicit trust the general populous has in the institution to appropriately regulate the value of a currency. Without a central bank's support, the cash of a currency holds no value (Werbach and Cornell, 2017: 325). Conversely, the responsibility of regulation for a cryptocurrency is executed through two interrelated mechanisms: the public ledger and hash mining.

The public ledger is a record of all transactions that have ever occurred on a particular cryptocurrency's blockchain and is available for viewing at any point in time to all users of that blockchain. This ensures that fraudulent transactions cannot occur, as there are now countless decentralized authorities analysing and using the same ledger rather than a singular centralized governing body.

However, verifying a public ledger takes time and computing power because of the digital cryptography involved, and so users of a blockchain would require some incentive to verify the public ledger (Tapscott and Tapscott, 2018: 35). The second trust protocol, hash mining, acts as the required incentive. The nodes on a cryptocurrency's blockchain constantly compete for the right to verify a set of transactions in exchange for a set amount of the respective cryptocurrency. This 'competition' proxies a consensus between the different nodes of the blockchain. Essentially, the blockchain leverages the chance for substantial payment in exchange for the right to extend the public ledger to authorize new payments.

Theoretically, these mechanisms allow anybody with a computer and an internet connection to participate in creating, administering, and trading cryptocurrencies. By default, this is a much more democratic system than a centralized currency which can be influenced by the unilateral decisions of a central bank. But in practice, blockchains have struggled to democratize economic systems; the centralization of computing resources by a few large blockchain mines has made it difficult for smaller miners to substantially contribute and benefit, as they are unlikely to win a hash mining sequence (Greenfield, 2017: 139).

## Understanding memes and social finance

### *The anatomy of a meme*

While Dogecoin has yet to be analysed substantially in academic literature, the nascent literature on internet memes and memetics can help us understand Dogecoin's popularity. At the most basic level, memes are a 'unit of imitation' that 'propagate themselves in the meme pool by moving from brain to brain' (Dawkins, 1976: 192). The definition has since been modernized as memes have become a common medium of communication in the digital landscape. They now exist as pictures with captions that circulate frequently in online communities. Shifman provides three attributes to internet memes. First, internet memes are 'cultural information that pass along from person to person, but gradually scale into a shared social phenomenon'. Second, memes can be reproduced by various means of imitation. Third, internet memes experience 'diffusion through competition and selection' (Shifman, 2013a, 2013b: 364–365). These attributes suggest that the distribution of memes is a sociological phenomenon that requires active participation from users to form communities (Gal et al., 2016).

Shifman identifies three dimensions we can use to assess the impact of a meme: content, form, and stance (2013: 367). *Content* refers to the components of the meme and the message it is attempting to provide. *Form* describes the media (disseminative technologies) or mode (representative technologies) used to distribute and publish a meme (Milner, 2016: 23–24). *Stance*

specifies the communicative and participatory elements of a meme. This encompasses an understanding of who is 'entitled to participate and how' (Shifman, 2013a, 2013b: 367), within the community of a meme; 'the right participants have to engage with content for that content to spread' (Milner, 2016: 200). This framework can be used to understand the memetic potential of a meme.

Memes are a 'social tool for negotiating [socio-cultural norms]' (Gal et al., 2016: 1700), and are therefore 'not an abstract process' (2016: 1700). The intentional motive required to participate in meme culture is subsequently a performative act (2016). In popular internet forums such as 4chan, Reddit, and 9Gag, memes can provide 'reminders of common cultural affinity' (Nissenbaum and Shifman, 2017: 498), making them essential artefacts to the construction of digital communities. The production of memes on these communities serves a dual purpose of self-expression for the creator, and a chance to participate in the community's culture (Segev et al., 2015; Nissenbaum and Shifman, 2017).<sup>11</sup> Consequently, memes become a near-universally accessible and understood medium to engage in online communities.

While many online communities exist simply for entertainment purposes, the satirical content of memes can be used as commentary or countercultural messaging against institutions in power (Nissenbaum and Shifman, 2020: 3). The classification of memes as *transitional satire* effectively demonstrates this concept, as it 'channels frustration from lacking agency into a ridicule of those perceived as powerful' (2020: 11). This ridicule is made inherently easier with memes as a result of their nonsensical nature. But unlike traditional forms of nonsense that sought a personal deconstruction of meaning, modern digital memetic nonsense inhabits a communal space that *generates* affective meaning (Katz and Shifman, 2017: 839). In culmination, memes have lessened the intellectual requirement to join countercultural communities online.

### *Blockchain and social finance*

The exchange of money between multiple parties is inherently a sociological phenomenon. Though the majority of traditional perspectives label money as an alienating force in which 'the social' has no impact (Ingham, 1996; Dodd, 2016), more recent analysis of money systems, spurred by the plethora of financial innovations in the 21<sup>st</sup> century, recognize that 'money shapes culture...and culture shapes money' (Dodd, 2016: 271).

Social finance, or relational finance (Tooker and Clarke, 2018), accepts that the exchange of money supports rather than hinders social distinctions (Dodd, 2016: 285). Generally speaking, the legitimization of monies can only occur when there is popular acceptance and adoption of a particular money (Dodd, 2018: 46; Dodd, 2016: 282). While qualities such as convenience and security often facilitate that process, the most important element in successfully adopting money is also the most sociological one: trust (Nelms et al., 2018: 17). For a money to experience widespread use, users must trust that the money's value is being appropriately represented by other parties also using said money.

This belief in trustworthy communities has made social finance a key element in pushes for democratized, or 'Rousseau-ean' money systems (Dodd, 2018: 44). However, the stark differences between our traditional perceptions of money and social finance often lead to labelling the latter as visionary or disruptive (Bátiz-Lazo et al., 2014; Tooker and Clarke, 2018). Though this is partially a result of new digital and network-based technologies fostering innovation in the social finance space, the larger disruption comes from social finance's mandate to replace intermediaries with direct social connections (Nelms et al., 2018; Tooker and Clarke 2018). As such, social finance is not just a movement towards the reorganization of money, but rather a 'vision of a new society' (Bátiz-Lazo et al., 2014: 107).



The aforementioned Bitcoin is arguably the most prominent large-scale attempt at social finance that we have seen thus far. Aside from its revolutionary ‘trust-less’ system, Bitcoin’s allure for social finance advocates is that it offers a direct route to achieving their goals of dismantling established financial structures and constructs (Nakamoto, 2008; Bjurg, 2016: 61). By moving their trust from centralized authorities to members of their community, Bitcoin users are supposedly fostering an environment where they function together ‘socially, in an economy and as an economy’ (Nelms et al., 2018: 25). By trusting their community, Bitcoin users believe that blockchains will ‘stop us from lying about history’ (Dodd, 2018: 50). Bitcoin should therefore demonstrate that blockchains, as an application of social finance, foster a philosophical revolution in how we treat money.

However, we argue that in practice, this is untrue. According to Matke et al., investment skill is a ‘necessary condition of Bitcoin investment’ (2020: 16). And while some users participate in the Bitcoin blockchain to support it as a purveyor of social finance (Nelms et al., 2018), a large proportion of users are primarily motivated by profit expectations (2020: 16). Outside of its core userbase, popular discourse on Bitcoin has focused on its merits as an investment product more than as a harbinger of a new financial era. The gradually increasing disregard for Bitcoin’s primary purpose means that ‘Bitcoins [are] being mined primarily not in order to be used but rather to be hoarded’ (Dodd, 2016: 368). Bitcoin is currently more of an investment vehicle than an agent of change.

### *Situating Dogecoin*

Discussion around cryptocurrencies inherently revolves around ideas of social finance; Nakamoto’s invention specifically cited providing an alternative to financial institutions (2008: 1). The meme status of Doge, however, introduced an important and arguably unprecedented cross-section between cultural value and financial value. If we generally accept that memes ‘[encapsulate] some of the most fundamental aspects of contemporary digital culture’ (Shifman, 2013a, 2013b: 4), we must also acknowledge that memes are a ‘unit of culture’ with the capacity to be transmitted and exchanged much like a currency (Dawkins, 1976: 192; Literat and Berg, 2019: 234). To understand the nature of Dogecoin, we must explain how it exists as money, meme, and a mix of both.

### *Dogecoin as money*

The infrastructure and code for Dogecoin was derived from Litecoin, which attempted to improve on Bitcoin’s transaction speed and introduce a new hashing algorithm (Padmavathi and Suresh, 2019: 318). The absence of an original infrastructure is a result of Dogecoin’s hasty development as a meme rather than as an intended competitor in the cryptocurrency market. Yet, Dogecoin still has important fiscal qualities that impact its value that other cryptocurrencies have had little success replicating.

Crucially, Dogecoin has no limit in its code that restricts the amount of DOGE that can be produced. Many other cryptocurrencies, including Bitcoin, have a finite supply of coins coded into their blockchains; in the case of Bitcoin, new bitcoins will cease to be produced by the network once 21 billion bitcoins have been produced (Böhme et al., 2015: 218). This in-built limitation is typically implemented to avoid inflation; an infinite supply of coins would gradually decrease the value of each individual coin. However, we must also acknowledge that this scarcity is artificial, which has in part led to the wild price fluctuations seen in Bitcoin and similarly constructed cryptocurrencies (Calcaterra et al., 2020: 216–217).

Bitcoin was once infamous for reaching prices of over \$10,000 (Bambrough, 2020) and has since reached values of over \$63,000 per BTC. These prices are more akin to investors holding stock than utopian idealists exchanging new forms of money. The forced cap on the number of Bitcoins in circulation likely means that these prices will only continue to climb as access to the original cryptocurrency becomes increasingly scarce. This further incentivizes Bitcoin owners to hoard their funds until they can cash out on a market that is likely to guarantee them a high realized return (Dodd, 2016: 368). This has manifested in the centralization of Bitcoin mining operations; at one point, two mining rigs in China,<sup>12</sup> AntPool and F2 Pool, constituted over 51% of the Bitcoin network's mining power (Greenfield, 2017: 139). Consequently, we can cautiously conclude that limiting the coin supply does little to support cryptocurrencies as a form of social finance.<sup>13</sup>

Where Bitcoin currently generates and rewards 6.25 new bitcoins per block mined (the end result of the hash mining process), Dogecoin generates and rewards 10,000 DOGE per block mined. Furthermore, where Bitcoin only generates a new block every 10 min, Dogecoin does so every minute (Tahiri, 2020). These technical qualities, combined with the lack of a supply limitation, work together to keep the price per DOGE low, and subsequently more accessible to the average aspiring blockchain participant; there is an abundance of DOGE supply to meet the rising demand of crypto-ownership as opposed to the decreasing availability of Bitcoin. These conditions are more likely to support a higher *velocity of money*—the speed of which money moves through the economy—for Dogecoin (Wang and Shi, 2006: 567).

This potential for high velocity can be attributed to Dogecoin's vibrant community, which was especially active on the Dogecoin Reddit, r/dogecoin. Users would tip each other in DOGE for content that was considered 'socially valuable' (Jeong, 2017: 60). Periods of increased trading volume for Dogecoin have also been caused by other cultural phenomena; there was a 638% spike in trading volume after a challenge was posted on the social media app TikTok during the July of 2020 urging people to invest in Dogecoin so that their collective wealth would increase (Winck, 2020). These motivations for circulating Dogecoin are only made easier by the low price per DOGE, which has historically been worth less than a dollar, and until 2021, less than a cent.

In culmination, the financial accessibility of Dogecoin ensures that it is available to virtually any willing participant. Accumulating a sufficient amount of DOGE to participate in the Dogecoin blockchain is not difficult whereas the same cannot be said for the much more expensive mainstream cryptocurrencies such as Bitcoin. However, Dogecoin's success cannot solely be attributed to these financial factors; if that were the case, any alt-currency without a supply limitation and a functioning codebase might have experienced the same success. Dogecoin separates itself from other alt-currencies by simultaneously existing as a *meme*.

### *Dogecoin as meme*

Before Dogecoin the cryptocurrency came to be, there was the Doge meme. To understand the socio-cultural value of Dogecoin, we must analyse the success of its preceding meme. Just as money exists in the financial economy, memes have an economy of their own where they are comparatively valued and disseminated to varying degrees of success (Literat and Berg, 2019: 245). Consequently, we need to analyse the key determinants of meme value to understand why the Dogecoin phenomenon occurred.

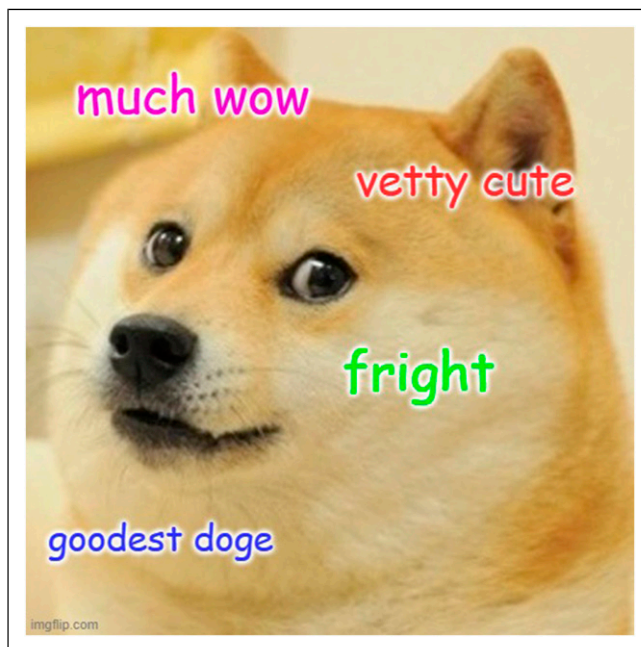
Literat and Berg outline four key determinants which we can use to situate the value of Dogecoin in the meme economy: 'positioning in relation to the mainstream, its versatility and expansion potential, its topicality or cultural relevance, and its perceived quality' (2019: 239). They describe a meme's value as part of a financial life cycle where the value of a meme grows as it gradually moves



from niche communities to mainstream social media (2019: 240). A meme is at its most popular when it reaches mainstream media, which Literat and Berg describe as the best time to ‘sell’ a meme, implying that it is the best time to distribute. Interestingly, the popularity of Doge peaked in late 2013, when it was deemed the year’s most popular meme (Watercutter, 2013), coinciding with Dogecoin’s explosive debut. We suggest that Dogecoin became a tangible representation of buying into the meme economy, with its creators having the foresight (or comedic timing) to release it during a period of peak demand.

Doge is inherently a versatile meme; it can represent any thought that can be exaggerated under the condition that it is plastered on top of a Shiba Inu (Esteves and Meikle, 2015: 561) [Figure 3]. For instance, advertisers used Doge to increase the visibility of their brands; statements in Doge memes ranged from ‘very benefits...many coverage’ in a Twitter post by the United States Department of Health and Human Services (Esteves and Meikle, 2015: 561), to ‘very exits’ and ‘so preparedness’ in a Delta Airlines advertisement (Bury, 2016: 36). Doge’s versatility ensured that it was widely recognized, contributing to the rapid rise of Dogecoin. Furthermore, the malleability of Doge ensures that it always retains a degree of topicality and cultural relevance, especially in an internet landscape obsessed with ‘puppers’ (Lee, 2017). The public’s general familiarity with Doge therefore makes Dogecoin a more culturally accessible meme, making it a more approachable form of participatory media for users to identify with (Gal et al., 2016). The versatility of Doge also suggests that it holds more robust topicality as its uses can be flexible, therefore stabilizing its value as described by Literat and Berg’s framework.

As for its quality, Literat and Berg suggest two main dimensions of meme quality: grammatical correctness and historical accuracy (2019: 243).<sup>14</sup> Historical context is not an applicable dimension with Doge, as this dimension more so describes memes making historical comparisons, especially in



**Figure 3.** An example of a doge meme.

satirical political discourse (Nissenbaum and Shifman, 2020; Literat and Berg, 2019: 243). However, Doge's grammar is a key element to its quality through its grammatical incorrectness. Doge uses its own grammatical system widely accepted and disseminated by the Doge community. For example, even though the phrase 'very fun!' is grammatically correct, it does not fit within the vernacular of Doge (a better alternative would be 'many fun!'). This unique form and stance initially positioned Doge away from mainstream media (Shifman, 2013a, 2013b), a key element to succeeding in the meme economy over time (Literat and Berg, 2019; Spitzberg, 2014).

Ultimately, we must understand Doge, and by extension Dogecoin, as a meme, and therefore as a type of cultural capital (Nissenbaum and Shifman, 2017: 485; Segev et al., 2015). The idea that memes help form cultural membership within a community is not Dogecoin's invention; Nissenbaum and Shifman conclude that memes 'constitute a cultural base that marks a commenter as part of... [a] community' (2017: 497). The participants of Dogecoin are not mere users of the cryptocurrency; they circulate Doge as a cultural item, which inevitably has implications for Dogecoin as money. The unique coalescence of meme and money constitutes Dogecoin's inimitable quality that gave it virality.

### *The duality of money and meme*

Jeong says it best when they state 'Dogecoin is not the only joke cryptocurrency, but it has been the most prominent one' (2017: 58). Dogecoin exists in a sphere of competition against both other memes and money. However, not all memes exist with equal success (Dawkins, 1976: 194). We have discussed how Doge's versatility is supported by its content and stance, but something that had been lacking before Dogecoin was a variety of *forms* (Shifman, 2013a, 2013b). Prior to Dogecoin, Doge could only be distributed as a picture file. While this certainly did not inhibit its popularity in 2013, the transformation from a PNG file to cryptocurrency gave Doge another mode of dissemination previously inaccessible to other memes. This entirely new meme 'market' is what gave Doge and Dogecoin an additional degree of virality.

If we conceptualize memetic virality as the accelerated movement of memes through nodes, then 'memes that are more popular are replicated by a larger number of actors or nodes' (Spitzberg, 2014: 326). The use of blockchain to disseminate Doge as Dogecoin simultaneously formalized this distribution process and added more potential nodes for Doge to be distributed. When Dogecoin began being traded as money, its potential for a high velocity of movement added even more potential for virality, giving it the ability to quickly pass through more nodes (Milner, 2016: 38; Spitzberg, 2014: 326). This reciprocal relationship is an illustration of Dodd's argument that culture and money cyclically inform one another (2016); where Dogecoin reinforces the relevance of Doge by situating it financially, Doge makes Dogecoin more accessible for the average participant. Before Dogecoin, cryptocurrency was seen as a preserve for the miners and investors of the blockchain community. With Dogecoin, we see the emergence of a whole new network layer of users who are using Dogecoin without being overly concerned with the backend technicalities of the blockchain. To them, they are just trading a meme.

To many of its users, Dogecoin represents Doge; rather than seeing the Dogecoin blockchain as a complex system of nodes and programming, they see a meme being traded at whatever price may be listed on CoinDesk on a particular day. The act of exchanging Dogecoin is equally cultural as it is financial. The Dogecoin Reddit elucidates this concept; the act of tipping users for good content is not only a financial reward, but a cultural exchange of community identity (Kuhn and Powers, 2020). If a user has made their Dogecoin wallet identity publicly visible, they may be rewarded with Dogecoin for producing quality content.

The relationship between cultural and financial value in Dogecoin is unique because it is a rare instance where they work symbiotically rather than independently or even confrontationally.<sup>15</sup> The financial solvency of Dogecoin amplifies the effect of Doge's cultural dissemination, while the cultural value of Doge directly bolsters the financial value of Dogecoin. This relationship of values is possibly unprecedented in the realm of cryptocurrencies and perhaps currencies as a whole. Perhaps the closest historical comparison is the use of national symbols on coins, bills, and other tangible forms of money (Ingham, 1996). But while these *represent* cultural forms of value, they are not disseminated because of the symbol they bear; in contrast, Dogecoin's exchange is supported by its cultural connections to Doge.

### *The impact of Dogecoin*

The prolonged success of Dogecoin has brought forth many questions over the future of blockchain both as a cultural phenomenon, and as a tool of social finance. Understanding the impact of Dogecoin and its implications for the future of blockchain technologies can help us understand if its success was truly unique, or if we can leverage any lessons learned to create socially accessible blockchains in the future.

### *Recreating cultural frenzy*

If the goal of blockchain as a method of social finance is to build a community large enough to sustain the value and usability of its own money (Bjurg, 2016: 61–62; Dodd, 2016; Nelms et al., 2018: 25), then an important question to posit is whether the popular success of Dogecoin is replicable. If so, it could provide a formula of success for more intentional social finance movements.

The real challenge of replicating Dogecoin's prosperity is determining how to recreate the cultural hype that supported the cryptocurrency's success. Unfortunately, identifying the cultural key success factors for Dogecoin is a much less exact science than adjusting the financial and computational elements of a blockchain. Cultural phenomena can often be seemingly random in nature. Great as it may be, the cultural power of memes alone is not enough to buoy every cryptocurrency made in their names; PepeCash, Cthulhu Offerings and the amusingly named Ponzi Coin<sup>16</sup> are all cryptocurrencies based on memes or other cultural items that failed to achieve Dogecoin's level of popularity (Minor, 2018).

The challenge of recreating Dogecoin's success is not emulating its technical qualities—consider that Dogecoin itself was meant to be a clone of then-more popular Litecoin— but instead trying to capture the same catalyst that led to its creation. Doge existed before Dogecoin; without the success of the meme, there is no inspiration to create Dogecoin, nor a community large enough to leverage and create value. If Dogecoin is invented in 2015 rather than at the peak of Doge's use in 2013, does it achieve the same amount of success? There are simply too many variables to consider when analysing such an unprecedented cultural phenomenon.

With that said, there are still important lessons to draw from Dogecoin's success among other meme-based alt-currencies. While studies of the qualitative characteristics of cryptocurrencies are scarce, Shehhi et al. tell us in their study that '54.5% of the participants believe that the cryptocurrency name and logo play a key role in choosing a cryptocurrency to mine and/or use' (2014: 1446). The same study mentioned that among participants, the top four cryptocurrencies used and mined were Bitcoin, Litecoin, Darkcoin, and (perhaps no longer) surprisingly, Dogecoin (2014: 1445). While there should certainly be some worry that

cryptocurrencies are being selected for their branding rather than financial traits, Dogecoin's direct comparison to Bitcoin legitimizes Palmer's theory that Doge makes Dogecoin, and thus blockchain, more accessible.

Adjusting to the demands of a non-professional audience is not typically advisable; it often involves compromising on the quality of the provided data or product. But where the success of social finance is concerned, we might need to reconsider that notion. It is virtually impossible for every person in society to understand every detail about how a fiat currency works, never mind blockchain networks which require some knowledge in computer science as well. But memes? Those are much more easily understood. Mass participation requires some degree of simplification, and using a popular cultural icon as a logo is an effective tool to accomplish that goal. Moreover, it is not as if new or unknowledgeable Dogecoin miners would be left to fend for themselves thanks to the existence of dedicated online communities.

Therefore, while it may be difficult to intentionally create the conditions necessary to have another successful meme blockchain that performs as well as Dogecoin, there is value to be uncovered in how a cryptocurrency is marketed and perceived. Rather than being designed for the programming 'elite' who understand the intricacies of blockchain code, a blockchain with the potential to democratize money systems should instead look to appeal to a wider, less programming-oriented audience. In Dogecoin's case, this appeal happened to be one of the most popular memes at the time.

### *A gateway to meme finance*

Understanding that Dogecoin is a cryptocurrency with large socio-cultural implications, we must ask the question: is Dogecoin a form of social finance? To the extent that Dogecoin is a blockchain and therefore participates in the proliferation of decentralizing technologies, then Dogecoin has a strong case for being considered a social finance initiative. The presence of Doge can subliminally help users feel more comfortable with blockchain technologies, eventually normalizing their use in the future (Bá tiz-Lazo et al., 2014: 105).

But we must also remember that Dogecoin was fundamentally meant to be humorous; any implications that it has for the future of social finance are purely accidental. Unlike Bitcoin, Dogecoin was never meant to be part of a social movement (Dodd, 2018: 40), nor was it a distinct political statement against the centralization of money systems (Tooker and Clarke, 2018: 58). Though Dogecoin as a meme could be considered a form of satire (Nissenbaum and Shifman, 2020), the target of the punchline is unclear. While Dogecoin's success ridicules traditional financial institutions by having a meme become equivalent in value to money that took centuries of bureaucracy to develop, Dogecoin equally patronizes cryptocurrencies with much more elaborate blockchain infrastructures that have yet to experience the same level of success. What Dogecoin represents for the wider success of blockchain technologies will depend substantially on how its satirical point is sharpened in the future.

Arguably, Dogecoin's most prominent presence in pseudo-political resistance was its role in the r/wallstreetbets movement. In summary, r/wallstreetbets was a collection of retail investors who exchanged advice on Reddit with the collective goal of wresting control of financial markets from big investment banks (Brown, 2021). They initially accomplished this by purchasing stock in the company GameStop (GME) when some users had discovered that several hedge funds held 'short' position on GME stock.<sup>17</sup> The corresponding spike in GME price caused some hedge funds to lose millions (Brown, 2021). As the movement gained traction, other securities were bought by investors from Reddit, with Dogecoin's meme status making it the perfect purchase to represent the

resistance's 'absurdity' (Katz and Shifman, 2017; Warren, 2021). Not only was it a 'meme currency', but Redditors were already familiar with it because of its prior popularity.

However, Dogecoin was not a security typically held by hedge funds given their general apprehension towards cryptocurrencies. Therefore, we cannot say that Dogecoin truly made an impact in generating tangible resistance against the Wall Street elite. But it did still contribute to the virality of r/wallstreetbets. Perhaps, Dogecoin is not a form of social finance in the classical sense, but it is a form of *meme finance*. Dogecoin's memetic virality allows it to propagate sentiment that counters traditional financial power structures (Milner, 2013), even if it did little to make an impact in this instance.

### *The future of dogecoin*

If Dogecoin has already fulfilled Nakamoto's vision for blockchain's purpose, then it may stand to reason that Dogecoin itself is a long-term answer to the issues of democratization plaguing blockchain technologies. Unfortunately, the answer is not so simple. Dogecoin can serve as a democratizer of value where currency is concerned, but blockchain has uses and implementations far beyond the cryptocurrencies that first championed the network design. Smart contracts, development platforms, and even the Internet of Things are all examples, though nowhere near exhaustive, of other blockchain use-cases. This is why the replication question is important; while democratizing how we generate money is a gargantuan step forward, there are other systems of control outside of capital that blockchain can also transform. Alas, Dogecoin is just that: a coin.

Irrespective, Dogecoin has proven incredibly resilient, already having survived its supposed lethal bubble when it followed its then-2018 peak with a crash of equal magnitude. Yet in 2020, Dogecoin was considered a top-50 cryptocurrency globally and was projected to experience the same level of growth as Bitcoin in the coming years (Diaz, 2020). The only constant in Dogecoin's wild nature is that it refuses to die. It has already proven that it can stay relevant in the age of internet memes, and its financial future has been stabilized by a mining merger with Litecoin (Judmayer et al., 2017: 320). This ensures that Dogecoin, despite no longer receiving active development from its original creators, has a stable blockchain infrastructure under the supervision of a larger blockchain network.

This is all we can say about Dogecoin's future without entering the realm of sensationalism and speculation. TikTok did not launch globally until 2018 and became a promotional platform for Dogecoin in the summer of 2020; this is to say that there is no point in predicting when the next Dogecoin 'boom' will occur because of how uncertain the future will be. With that said, the Doge meme sees continuous use, albeit sometimes in different formats than the original.

Finally, we would be remiss to not mention the status of the original Doge in a discussion of Dogecoin's future. Despite rumors that Kabosu had passed away in 2017, she is still healthy, though she approaches retirement, as of October 2021 according to an Instagram page dedicated to Kabosu made by her owners (kabosumama).

### **Conclusion**

In 2013, a meme became the basis for a cryptocurrency. Nearly nine years later, Dogecoin remains among the world's top cryptocurrencies and arguably a model for success in community-generated money. While it began as a joke meme, Dogecoin became popular and developed one of blockchain's strongest communities because of its cultural relevance. The accessibility of cultural value, paired with the anti-inflation protocols within the network, ensure that Dogecoin is distributed quickly and cheaply throughout its community of participants. Its power to act as a

proponent of meme finance implies we may need to rethink our approach to money systems and the value of memes in our society.

This article has made several contributions to the academic literature on memes and social finance. First, our paper presents the first comprehensive history of Dogecoin in meme literature, facilitating future research. Second, we analysed the atypical intersection between the literature of memes and social finance. Though Dogecoin remains a unique phenomenon, the virality of Dogecoin has ultimately helped social finance movements gain traction; understanding the role of memetics in creating virality can help us guide future social finance efforts to greater success. Third, this article represents the first overall case study of Dogecoin. Despite its popular success, meme literature has yet to comment on Dogecoin. This work offers a starting point for future analysis and critique of Dogecoin from researchers.

Given that the literature around the cross between meme and money is still new, there remain many avenues for future research. Firstly, quantitative research on the impact of the Dogecoin phenomenon could help in assessing the magnitude of its impact, such as whether the conceptual theories on the velocity of Dogecoin are supported empirically. Second, there now exists an opportunity to explore the aforementioned concept of meme finance. Before r/wallstreetbets, Dogecoin existed as an isolated phenomenon. But afterward, it became a tool of a greater movement. The exploration of meme finance could hold great promise in understanding the future of participation in social finance initiatives.

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### **Notes**

1. Examples include, but are certainly not limited to, Ethereum, which fosters development for blockchain applications, and Hyperledger Fabric, whose users are supporting the creation of modular blockchain application production.
2. While it is important to understand how cryptocurrencies and blockchain function, a full explanation is outside the scope of this article. For a clear explanation, I would recommend Adam Greenfield's chapter on



Cryptocurrency in *Radical Technologies: The Design of Everyday Life* for a simplistic breakdown. For a more technical explanation, I would recommend Joseph Bambara's and Paul Allen's *Blockchain: A Practical Guide to Developing Business, Law, and Technology Solutions*. I cite both heavily while offering a short explanation.

3. Also called 'alternative currencies'.
4. For clarity in this article, Dogecoin refers to the cryptocurrency, Doge refers to the meme, and DOGE refers to a unit of Dogecoin.
5. Unless otherwise stated, all dollar amounts in this article are to be read as American dollars (USD).
6. The original blog post containing the photo used in the original Doge meme can be found here: <https://kabosu112.exblog.jp/9944144/>.
7. The technical infrastructure for Dogecoin was based off Litecoin (Chohan, 2017: 2).
8. The r/wallstreetbets movement was an investing movement by retail investors hosted on the Reddit page of the same name. The movement can be broadly described as a resistance against large investment banks' control and influence over stock markets by inflating the cost of stocks that the investment banks had believed would fall in price (Tufekci, 2021).
9. Due to the unpredictability of Dogecoin and its performance, we will limit our analysis of Dogecoin's performance and related phenomena from its inception to July 2021.
10. The first cryptocurrency, Bitcoin, was invented before the term 'blockchain' had been popularly used. The term 'block chain' was first used by Nick Szabo to describe his own iteration of a trust-less system (Szabo, 2008), although he never implanted it himself (though there exists speculation he is the true identity behind Satoshi Nakamoto). The blockchain network was derived from the infrastructure of Bitcoin with the potential for other uses (e.g. smart contracts).
11. Given that not all internet communities contain respectful content; several forms of discrimination can often take place in digital communities, and the dissemination of memes has often promoted these misguided ideologies (Milner, 2013). We would like to make it clear that when analysing the disseminative power of memes and their ability to create communities, we do not intend to glorify forms of discrimination that may be present in some meme communities.
12. While most cryptocurrency mining operations in China have been shut down due to legislation passed in 2021 (Shen and Galbraith, 2021), many miners been able to move their rigs to other crypto-friendly nations to resume operations there. Consequently, centralization of the Bitcoin blockchain remains an issue.
13. We say cautiously due to the dearth of empirical evidence suggesting that Bitcoin is becoming more difficult to trade. However, the theory that the rising price of Bitcoin excludes the majority of blockchain participants is accepted by social finance academics (Dodd, 2016; Bjurg, 2016).
14. Literat and Berg also mention the presence of a watermark impacting meme value but did so in relative passing compared to the other two dimensions. Either way, the idea is not particularly relevant to our discussion here.
15. Examples of this dissonance include the constant struggle of cultural arts institutions to receive public funding. Their lack of perceived financial value is often put into competition with the need to preserve culture.
16. Cryptocurrencies have often been called Ponzi Schemes by individuals who doubt their credibility.
17. To 'short' a stock means to bet against the underlying company's performance. Holders of a short position profit when the value of the company drops beneath the price of when the short happened.

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