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Crypto-giving and surveillance philanthropy: Exploring the trade-offs in blockchain innovation for nonprofits

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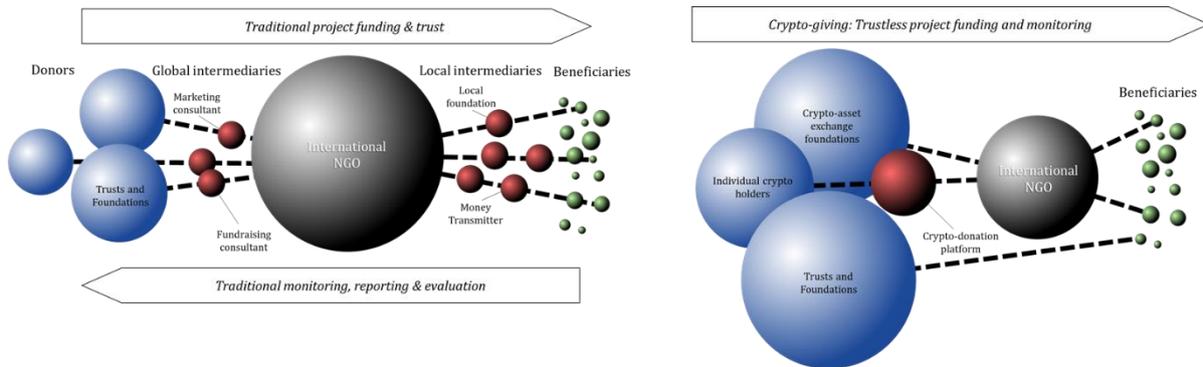
Abstract

A blockchain is a smart electronic database, distributed to all users, immutably tracking every transaction that has ever taken place between nodes on a network. The technology is being used by some nonprofits to address various operational challenges, including attaching automated conditions to charitable donations facilitated by programmable ‘crypto-giving’ platforms. Drawing from analysis of technical documents provided by active crypto-giving projects, this review considers how these platforms enable radical shifts in sectoral power relations through ‘surveillance philanthropy’. This algorithmic surveillance ensures project funding fully reflects the interests of donors, whilst potentially restricting nonprofits in meeting the dynamic and complex needs of project beneficiaries. The paper considers the benefit trade-offs from crypto-giving platforms in three areas of utilisation: 1) new forms of donor engagement and fundraising, 2) new tools for organisational governance, and 3) novel provision of development assistance. Despite the possible efficiency and transparency benefits of novel crypto-giving platforms, more research and practitioner engagement is required to ensure the sector’s funding is secure and sustainable, without entailing significant risks for proposed beneficiaries.

Introduction

The nonprofit sector is experiencing significant shortfalls in revenue (IOF, 2020). The current COVID-19 pandemic is converging with pre-existing fundraising concerns caused by high-profile corporate governance and traceability scandals fuelling public distrust, donor apathy and increasing regulatory costs (Prakash, 2019). To address these operational challenges, some nonprofits are exploring potential solutions through programmable ‘crypto-giving’ platforms (Koksal, 2019; Amoils, 2020; Frost, 2020). These platforms use blockchain technology to encode specific conditions into charitable donations (Elsden et al., 2019). Unlike a traditional centrally administered database, a blockchain is a smart electronic ledger distributed to all users, immutably tracking every transaction that has ever taken place between nodes on a network. A blockchain is almost completely hack-proof, as there is no single controller or point of authority to make mistakes or allow uncontrolled changes to the system. An automated verification protocol enables data transmitted on a blockchain network to be stored for as long as there is a functioning internet as cryptographically-secured ‘blocks’, strung together in a ‘chain’ (Howson, 2019). The first use of the technology was through the development of the cryptocurrency, Bitcoin. Blockchain now has many uses beyond cryptocurrencies. The Ethereum ‘smart contract’ blockchain can facilitate automated transactions. These secure mechanisms for electronic collaboration are made possible through self-executing code eliminating the need for intermediaries to broker between parties. Donors can therefore engage nonprofits in a ‘trustless’ relationship – they do not need to know or trust each other at all, because they can trust the authenticity of entries on the distributed database. Using this technology, crypto-giving platforms promise to empower donors with more control, transparency and security in fundraising and aid provision (see Figure 1).

Figure 1. Relative power-asymmetries in traditional and crypto-giving mechanisms



Such a donor-centric approach inevitably brings trade-offs for target beneficiaries and nonprofits (Elsden et al., 2019). This review explores how the radical shift in power relations enabled by crypto-giving platforms, promote ‘surveillance philanthropy’ – productising the giving experience in the interests of donors, whilst bridling nonprofits from meeting the complex and fluid needs of project beneficiaries. The review draws from a systematic analysis of international blockchain project technical documents (or white papers¹) to explain, in the following section, how blockchain technology encodes surveillance mechanisms into charitable giving (see Table 1). The paper then focuses on nine significant benefit trade-offs for nonprofits buying into blockchain innovation, in three areas: 1) donor engagement and fundraising, 2) organisational governance, and 3) provision of humanitarian assistance. Given the rapid evolution of the technology for the sector, the paper concludes by considering potential questions for further research from critical scholars and practitioners, to ensure the emergence of more equitable outcomes.

¹ White papers are documents issued by blockchain developers, which include an outline of a problem that the project is looking to solve, the solution to that problem, and a product description. A broad desk-based inspection of around 30 blockchain-based giving platforms and tokenised projects engaged in philanthropy was conducted. Their active/dormant status was checked against exchange databases. Interviews took place with developers where a project’s status could not be confirmed online. Interviews with nonprofits were used to confirm cryptocurrency fundraising strategies.

Table 1: Summary of reviewed crypto-giving projects

Project	Developer(s)	Established use-case	Development phase
<i>Fundraising / donor engagement</i>			
Blockchain Charity Foundation	Binance	Cryptocurrency donations platforms sending direct payments to beneficiaries.	Active
BitGive	BitGive Foundation	Nonprofit soliciting Bitcoin donations for charitable causes.	Active
AidCoin	AidChain	Incentivises charities to pay service providers in AidCoin to enhance donations trackability.	Active
Humanity Token	Decent	Allows restricted spending on eligible goods and services, e.g. food, shelter, healthcare and professional courses. Aims to prevent access to alcohol, drugs etc., while providing assistance in overcoming ‘challenging life conditions’.	Active
Promise Giving	Giftcoin	Blockchain based conditional giving and project milestone tracker.	Active
Give Crypto	CoinBase	Nonprofit distributing cryptocurrencies to people living in poverty.	Active
rTrees	Victor Rortvedt	DeFi funding for tree planting and sustainable agriculture using interest earned on DAI stable coin holdings.	Active
<i>Organisational governance</i>			
Ixo	Shaun Conway	Nonprofit organisation, monitoring conservation and development projects through Ixo’s blockchain-based platform.	Active
The Giving Block	The Giving Block	Provides a platform for nonprofits to accept cryptocurrency donations like Bitcoin.	Active
Monero	Monero development community	Open-source cryptocurrency with an obfuscated public ledger, meaning anybody can broadcast or send transactions, but no outside observer can tell the source, amount or destination.	Active
ZCash	ZCash Foundation	Privacy-preserving cryptocurrency with option to send normal transactions (selective disclosure) or shielded transactions (private).	Active
<i>Humanitarian assistance</i>			
CedarCoin	UNDP Lebanon	Digital asset aiming to support development and humanitarian effort in Lebanon.	Active
Building Blocks	WFP	Blockchain project aiming to make cash transfers more efficient, secure and transparent.	In-development
PassBase	Passbase	Blockchain based ID, age verification, KYC and AML compliance and liveness detection platform	Active

Unblocked Cash	Sempo / Oxfam	Ethereum-based Cash and Voucher Assistance solution enabling more speed, efficiency, and transparency in aid for disaster relief.	Case-study pilot
Dash Text Charity	Dash Text	Enables payments using Dash network directly to beneficiaries using SMS without the need for other non-profit intermediaries.	In-development
OmiseGo	OMG Network	OMG Network is a trustless, non-custodial, scaling solution for transferring value on Ethereum.	Active

Crypto-giving and surveillance philanthropy

According to Zuboff (2019), the digital worlds that surround individuals and organisations are being hijacked by a rogue economic logic. This hijacking or ‘surveillance capitalism’, describes the process whereby private human experience is tracked by digital technology platforms both online, as well as in physical space, via networks of smart phones and Internet of Things (IoT) devices. The harvested ‘behavioural data’ is then used in the development of ‘prediction products’, which in turn are used to influence the behaviour of users in the interests of the platform. For these individual users, this influence is part of the now mainstream economic model yet generally covert in nature (Eubanks, 2018). Surveillance philanthropy is used here to explain how embryonic crypto-giving platforms afford donors influence over nonprofits in a more overt and restrictive manner. Nonprofits have always needed to balance restricted and unrestricted donations to fund projects. This balancing in a trustless ecosystem is more efficient, disintermediating, and empowering for donors. But building partnerships held together by strings of code promotes a relationship where ‘donor is always right’ (Elsden et al., 2019). Donors who perceive the needs of beneficiaries in contexts agreeable to their own interests can guarantee nothing becomes lost in translation. Funds flow unimpeded through a more limited cluster of intermediaries towards project beneficiaries, limiting the ability of nonprofits to tackle structural root causes of issues that might impact the donor’s bottom line. Despite the inherent downsides of donor surveillance

for nonprofits, many organisations are attracted to blockchain by new fundraising opportunities that arise from receiving donations using popular cryptocurrencies like Bitcoin and Ether.

Blockchain for donor engagement and fundraising

Younger people, who are traditionally less likely to donate regularly to charity, are more likely to use cryptocurrencies (Waldersee, 2018). This group are also far less likely to trust nonprofits or give spontaneously through direct charitable marketing appeals (Gregory, 2014). In order to attract this group, successful fundraising is becoming more innovative and donor-driven, whilst taking place across multiple digital platforms, including blockchain (Christie, 2020). For most organisations and beneficiaries, the fundraising opportunities afforded by blockchain come with trade-offs, namely concerning the price volatility and fungibility of crypto-assets, and the tax implications from their utility (see Table 2).

Table 2: The benefits and risks of crypto-giving mechanisms for nonprofits

Organisation(s)	Fundraising mechanism	Benefit(s)	Risk(s)
RNLI (UK Lifeboats), Sea Shepherd , HHUGS , The Virtual Doctors , WikiLeaks .	Charity advertises a fixed cryptocurrency wallet address on a fundraising website.	No laborious personal verification checks or expensive intermediary fees. Full control of account operation for the recipient. Transparency for the donor using a	Full disclosure of organisation’s cash-out practices could be detrimental, e.g. seemingly inactive wallets discourage potential donors. Wallet keys (like passwords) could

		blockchain explorer, like Blockchain.info .	go missing, meaning permanent loss of funds.
Greenpeace , UNICEF , Rainforest Foundation US , Save the Children , Lepra .	Organisation uses a payment-collection intermediary, e.g. The Giving Block , Coinbase , BitGive or BitPay , to facilitate donations using cryptocurrencies.	Intermediary issues tax receipts to donors and fulfils legal AML/KYC requirements on behalf of the recipient whilst promoting the organisations' appeals through their networks.	Intermediaries require charities to sign-up to standard subscription packages, or fractional cost model. These costs can be prohibitive for small charities. Requires trustworthy intermediary. Limited transparency may discourage proponents of peer-2-peer technology.
Bahamas Hurricane Relief ; Italian COVID19 Appeal	Charity uses a hybrid intermediary platform, such as GiveTrack , Binance Charity and Helperbit to facilitate charitable donations using popular cryptocurrencies.	Low/no intermediary fees. Better user interface in comparison to fixed wallet addresses, but with the same donation traceability features, matching payments information with blockchain transactions.	Intermediaries require return of multiple signed documents to verify authenticity of the charity. Charity often retains control of wallet keys, which could go missing.
IUCN/Porini Foundation , Eden Projects / WildChain , Cool Earth .	Charity establishes its own crypto-token, sometimes with an Initial Coin Offering (ICO) style sale. Each token platform is different. The value of the	Coin-sales can be lucrative and, with a crowdfunding model, somewhat low-risk for a charity, even without a fully operational platform (Vigna, 2019).	Majority of coin-sales fail to achieve their stated objectives. Most projects that raise funds through public ICOs fail to form

token is derivative, based on its utility within the platform.

functioning projects (Howson et al., 2019).

Human Rights Foundation , Salvation Army UNICEF .	Charity registers their online content (website, Twitter, YouTube etc.) with tokenised web-browser, such as Brave , Thankful or FullDive . Users of web-browsers donate ('Tip') charities using tokens bought, or awarded for viewing online advertising.	Simple process and charities can 'cash-out' to fiat or other cryptocurrencies by opening a 'hot wallet' account such as Uphold . Account keys can generally be recovered if lost.	Rewards are deposited as a token e.g. BAT . Standard Microsoft browser already offers reward/tipping features using fiat currencies.
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Trade-off 1: Volatility of crypto-asset prices disproportionately impacts local beneficiaries

Many charities have benefited from receiving donations of crypto-assets, the value of which have increased significantly in a relatively short time. However, only 34% of cryptocurrency owners use the technology as a means of exchange or donation (Lielacher, 2020). Users who 'cash-out'² using an exchange, are often given the opportunity to donate their tokens to a charity or appeal associated with the exchange. Coinbase, for example, are associated with the Give Crypto Foundation, a charitable fund distributing cryptocurrency to individuals in the Global South. Similarly, Binance, the world's largest exchange, request donations to their Blockchain Charity Foundation. Those with small balances and limited interest or need for the technology, often donate their tokens to give them an effective use (Koksal, 2019). For these donors, transmitting cryptocurrencies directly to beneficiaries can encourage recipients

² To convert digital assets to fiat currency, token holders can 'cash-out' using a peer-2-peer platform that connects buyers and sellers, or use a third-party exchange that usually attracts fees.

to hold balances without converting to a more usable currency. For example, the East Bali Poverty Project, accepts Bitcoin via the BitGive payment platform. The local beneficiaries in this partnership often prefer to hold received Bitcoin in speculation of future price rises, rather than allocating these donations to cover immediate project costs (Castor, 2017). However, unlike more stable currencies, Bitcoin can decline in value by up 50% in just a few hours, as it did in March 2020, risking significant losses for project partners if cashing out at the wrong time (Young, 2020).

Trade-off 2: Tax efficiencies impact local government spending in poorer countries

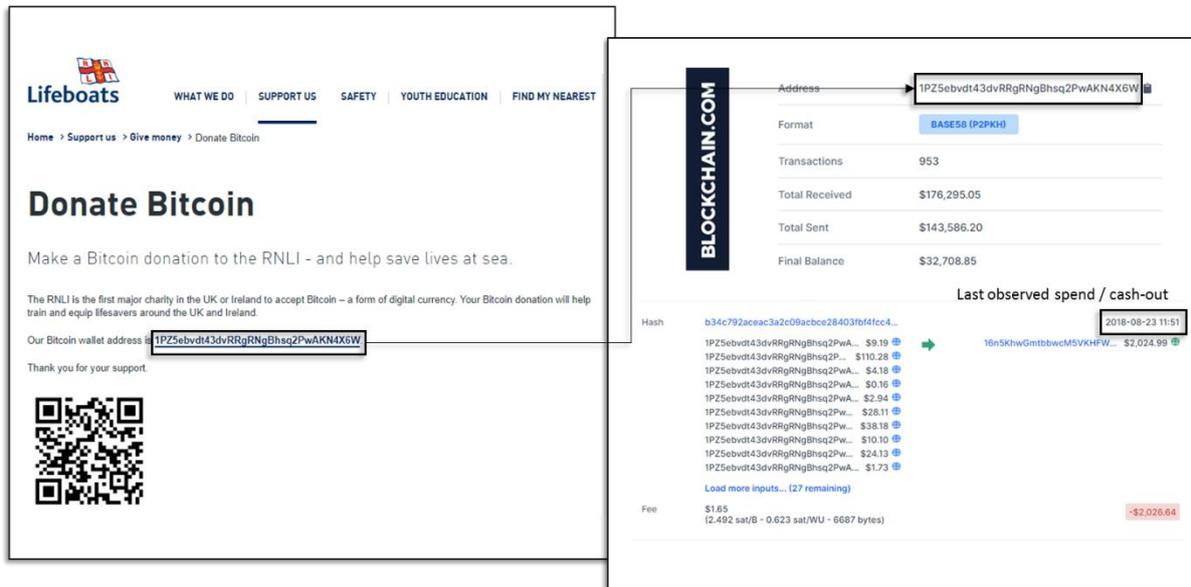
Donating and transmitting trackable digital assets using platforms like BitGive, can be more ‘tax-efficient’ compared to selling them, usually attracting capital gains tax, and then donating the after-tax fiat proceeds. Some intermediaries, for example LibraTax, offer consultancy services enabling donors to transmit digital assets with the least possible tax liability. The tracking features of BitGive and LibraTax displaces state interference in peer to peer money transfers – understood as a corrupt undue constraint on the relationship between donors and beneficiaries (Shin, 2018). This framing of the state as a corrupt entity in the Global South, has meant many poorer countries are not raising enough tax revenue to fund even the most basic services, like healthcare and education (Christian Aid, 2018). As the UK Tax Dialogue reports state, “If we are to achieve the ambitious Sustainable Development Goals (SDGs), then considerable new sources of finance need to be found, and this includes domestic tax revenue” (ibid p3). Until more robust tax policy frameworks are developed, crypto-giving platforms are likely to prove an impediment to those goals.

Trade-off 3: Nonprofits lose flexibility in responding to the complex needs of beneficiaries

A number of developers, such as AidChain and Humanity Token, are constructing blockchain platforms with their own proprietary tokens to promote more efficient and transparent governance frameworks for charities. AidChain for example, perhaps the starkest example of

surveillance philanthropy, have developed the AidCoin token, which they aim to be the preferred global method of charitable giving. Greater surveillance is achieved via the Ethereum smart contract blockchain, allowing donors to track and manage how funds are spent. AidChain incentivises charities to pay their service providers in AidCoin in order to improve transparency in the tracking process. WWF Italy and four smaller charities are accepting donations via the AidChain platform. The Promise crypto-giving platform has partnered with eight UK charities, including English Heritage. Promise, which is a for-profit company, also collaborates with Charity Checkout to make the platform available to its 2,000 registered charities (Promise, 2018). The Promise platform empowers donors by validating evidence provided by any participating charity, proving the completion of project milestones, before funds for subsequent phases of the project are released. Promise and AidChain also enable donors, who may not be contextually grounded in the local realities of development projects, to define what constitutes success and failure. Promise's whitepaper states, "[I]f a project falters or fails, the funds not yet released can be returned to you as the donor to be donated to a new project" (Promise, 2018, p8). Such interventions raise profound questions concerning who gets to enact their vision of success, local people, or the donor; who gets to regulate development projects, and how? Donations, though cost-effective and tax-efficient for the donor, become highly conditional and inflexible for recipient nonprofits. (see Figure 2).

Figure 2: RNLI’s Bitcoin fundraising webpage (left) and RNLI’s associated Bitcoin transaction history (right)



Give Crypto have discussed a crypto-donation platform designed to restrict the ability of nonprofits from cashing-out above predefined allowances dictated by the platform. This platform would essentially force nonprofits to adopt a pre-programmed token as a means of exchange instead of local fiat currencies, offering maximum transparency for donors, and profit potential for platform developers (Shin, 2018).

Trade-off 4: Crypto-giving risks corroding the established brand image of nonprofits

Enabling programmable digital currency donations can increase the public profile of a charity, but such associations can also impact a nonprofit’s well-established brand image (Boukis, 2020). Cryptocurrencies remain synonymous for many with drug trafficking, money laundering and other nefarious activities on the ‘dark-web’ (McCormack, 2018). Although it is near impossible to corrupt the data stored on an immutable blockchain, in 2019 an estimated 4.26 billion USD has been stolen from cryptocurrency user wallets and exchange servers (CipherTrace, 2019). High-profile bogus blockchains, like OneCoin (Bartlett, 2020), Bitcoin Ponzi schemes like PlusToken (Helms, 2020), and questionable environmental asset

exchanges, like Veridium Labs (Howson, 2020b), continue to tarnish public perceptions of digital assets. By association, such scams could tarnish a nonprofit's fragile brand image without careful governance measures in place.

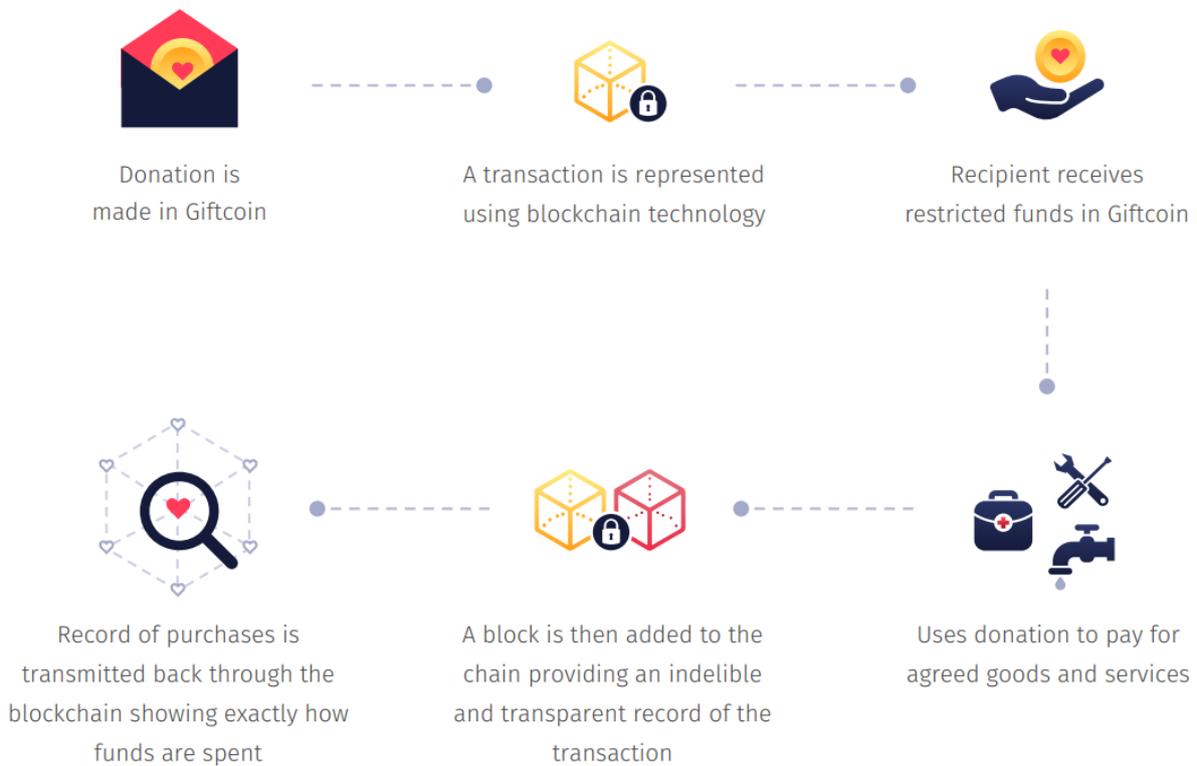
Blockchain for nonprofit governance

Almost all the functions of charity regulators could be automated using smart contract blockchains. Davies (2016) explains how these surveillance structures verify the credibility of trustees by automating relevant background checks. They enable the registering of nonprofits on a distributed database where network nodes validate and enforce agreements. Periodic reporting requirements are automated with real-time information on spending available to everyone. These surveillance measures attract significant risks and asymmetric benefit sharing arrangements for nonprofits, donors, partner organisations and project beneficiaries.

Trade-off 5: Ensuring confidentiality for nonprofits is difficult

Some nonprofits avoid the surveillance mechanisms of crypto-giving platforms and request cryptocurrency donations directly to fixed wallet addresses advertised on fundraising websites. Although simple and secure, this approach can prove problematic. Maintaining a fixed address means cryptocurrency tokens can be easily tracked using a blockchain explorer (see Figure 3).

Figure 3: The Promise platform’s philanthropic value chain (Source: Promise).



Sea Shepherd has operated a single wallet address since September 2019 from which they cash-out all received Bitcoin to fiat following each donation. WikiLeaks adopts an approach whereby all donations received since March 2018 are held as Bitcoin without cashing out. The organisation’s Bitcoin balance has, at the time of writing, a value of 65,000 USD. Nonprofits may prefer to wait for future asset price increases, hope for mainstream adoption, or simply lose access to wallet keys rendering balances useless. To ensure confidential management of wallets requires the enduring commitment of wallet controllers, or the intervention of crypto-giving platforms, necessitating fees.

Advertising a single address provides maximum transparency. However, larger organisations such as Greenpeace, UNICEF and The International Red Cross, use intermediaries, like The Giving Block and BitGive, to facilitate less visible transactions. As well as creating a new

unique address for each payment, the intermediary also completes ‘Know Your Client’ (KYC) and Anti-Money-Laundering (AML) checks on the nonprofit’s behalf. These platforms charge subscription fees making them impractical for smaller NGOs without a guaranteed sustainable income of cryptocurrency. Privacy-preserving cryptocurrencies, such as Dash, Monero and Zcash, allow users to remain more anonymous without needing a trusted intermediary to facilitate transactions. However, the more anonymous nature of these cryptocurrencies present significant challenges for KYC/AML and regulating political organisation fundraising and controlling the influence of ‘dark money’ (Burcher, 2019).

Trade-off 6: Crypto-assets are less fungible for local beneficiaries

For charities in the Global North, cryptocurrency balances are simple to exchange for any other currency. Crypto-assets are generally less fungible, and therefore less useful, in the Global South (Howson, 2020a). However, some intermediaries, like GiftCoin claim crypto-giving can decolonise philanthropy. The project’s founder Jon Duschinsky states, “GiftCoin is shifting power away from the charities and nonprofits, back to the beneficiaries. We’ve got this idea that ‘we know best’. It’s a colonial vision of philanthropy and social change. We’re completely shattering that. [...] The olden days of putting white people in [Toyota] Land Cruisers in Africa to solve problems, doesn’t work” (BBC, 2018). However, the decolonising potential of blockchain projects is limited. Cryptocurrency donors in the Global North might incentivise broad adoption of certain tokens, but international exchange restrictions prevent local partners in ‘high risk’ countries, as defined by US Department of the Treasury’s Financial Action Task Force and Office of Foreign Assets Control, from cashing out, leaving recipients dependent on crypto-giving platforms in the Global North (Howson et al., 2019).

Blockchain for delivering humanitarian assistance

Despite the risks of surveillance philanthropy incurred by nonprofits experimenting with blockchain technology, with its nascent regulatory frameworks, many state regulators and inter-governmental bodies continue to act as the principle drivers for mass-adoption. The UNDP's AltFinLab have developed a blockchain crowdfunding initiative, connecting Lebanese diaspora to sustainable development projects at home through a cryptocurrency called CedarCoin (UNDP, 2019). This 'technology first' approach to delivering humanitarian assistance deserves scrutiny.

Trade-off 7: Crypto-giving may compromise the privacy of vulnerable groups

Blockchain is enabling efficient data sharing between agencies, but the costs and benefits of these blockchain innovations are not equitably distributed. Crypto-giving jeopardises the sovereignty of beneficiaries' personal information. The World Food Programme's (WFP) Building Blocks initiative for example, is helping the WFP distribute cash-for-food aid to over 500,000 Syrian refugees in Jordan (Rugeviciute and Mehrpouya, 2019). Personal data, entitlements and transaction logs are stored on the Ethereum blockchain providing a virtual bank account and ID for each refugee. The Building Blocks platform monitors biometric data using iris scans on refugees in shops where Building Blocks tokens are spent. Such surveillance robs vulnerable people of their dignity. Sensitive, personally identifiable information for some of the most vulnerable people in the world is also being generated and made accessible across agencies, inevitably introducing greater risk of data breaches. PassBase and other for-profit start-ups have also developed blockchain tools to manage sensitive information. Data colonialism for humanitarian ends combine the extractive practices of historical colonialism with the abstract quantification methods of computing that works at every point in space where people and/or things are attached to everyday communication infrastructures (Couldry and Mejias, 2018). Where permissionless blockchain

applications, such as Building Blocks, are deployed, refugees and other vulnerable people, might find themselves forced to give up personal (including biometric) information about themselves, stored for as long as there is a functioning internet on an immutable archive, in return for temporary support with basic necessities. As others suggest, such use-cases highlight the obvious need for a more robust crypto-regulation to effectively mitigate the risks associated with data protection, privacy and human rights (Rugeviciute and Mehrpouya, 2019).

Trade-off 8: Crypto-giving platforms restrict the economic freedoms of vulnerable groups

Like Building Blocks, the for-profit crypto-giving platform, Sempo, has developed blockchain infrastructure to deliver e-cash to Syrian refugees in Lebanon and helped distribute aid to displaced families in Athens and Kurdistan. Sempo, in partnership with Oxfam and ConsenSys, has also piloted a blockchain platform for delivering the DAI stablecoin³ to communities in Vanuatu. The UnBlocked Cash pilot has delivered 10,000 USD worth of DAI to 187 heads of households and 29 local vendors. The system uses Near-Field Communication (NFC) cards and other infrastructure allowing the system to cope with poor internet connectivity, while ensuring double-spends are impossible despite offline transactions. Oxfam set out to determine whether blockchain could reduce the cost and transaction time of Cash and Voucher Assistance (CVA), while improving transparency, security and user experience (Oxfam, 2019). CVA programmes, where cash is provided directly to aid recipients, is generally considered more effective, efficient, and acceptable to beneficiaries compared to in-kind assistance (Doocy et al., 2020). CVA programmes give recipients a greater level of freedom to decide and meet their own spending priorities. The UnBlocked Cash tokens can be switched on/off in a way that cash systems cannot; the project implementer is empowered to define the temporal and spatial boundaries of any disaster event that would trigger the system to come online.

³ Stablecoins are cryptocurrencies whose market value is pegged to a stable asset or fiat currency, such as the US dollar in the case of DAI, to minimise price volatility.

The UnBlocked Cash pilot depended upon a network of trusted third parties, including developers, engineers and financial service providers. Dash Text is a crypto-giving platform that completely removes the need for nonprofit intermediaries. The founders of Dash, a permissionless, open source cryptocurrency, developed the platform for donors to send cryptocurrency directly to groups of school children in Venezuela. Canteens at participating schools are issued mobile phones and crypto-wallets to accept Dash as payment for school meals (Dash, 2019). The platform is transparent and there are no intermediaries. However, if expanded this approach to humanitarian assistance could dissolve local expertise, with projects plugged in directly to international crypto-giving surveillance networks without mediation.

Trade-off 9: Poorer communities are more vulnerable to surveillance and economic experimentation

For traditionally apathetic groups, novel technology is increasing awareness of development issues. However, those most in need of development assistance often tend to be those lacking the necessary infrastructure to benefit from blockchain technology, including through crypto-giving donations. Where access is enabled, their remoteness may cause them to be especially vulnerable to disaster events, as well as vulnerable to economic experimentation and surveillance from those convinced of the benefits of blockchain technology. Poverty reduction is often used to justify ‘crypto-colonialism’, whereby blockchain technology enables the extraction of economic benefits from those suffering the scars of colonialism in the Global South (Howson, 2020b). One of the starkest manifestations of this blockchain-based neo-colonialism is observable in Puerto Rico, where Hurricane Irma caused significant disruption in 2017. As Crandall (2019) explains, relief efforts following the disaster enabled the grandiose aspirations of libertarian expat organisations. Despite concerns from local communities, many of these expat organisations maintain explicit motivations of turning

Puerto Rico into a ‘Crypto-utopia’, a new Silicon Valley for the global fintech industry (Crandall, 2019).

To ensure donors can see the impact of their donations, on-the-ground surveillance using cryptocurrencies has included novel monitoring and impact evaluation. GiveDirectly and blockchain startup, OmiseGo for example, have distributed cryptocurrency donations to vulnerable families in Uganda as unconditional grants⁴ (GiveDirectly, 2018). However, in order to identify potential recipients that are most in need of assistance and to evaluate impact, the organisation monitors recipients’ salivary cortisol levels using an oral swab test as a measurement of relative stress levels (Shin, 2018). Basic income grants are unconditional – they do not require repayment. But potentially crude, invasive and humiliating hi-tech surveillance conditions are imposed on crypto-giving recipients.

Researching future trajectories of crypto-giving

For researchers interested in the dystopic impacts of crypto-giving for the sector, there is a propensity to ‘throw out the blockchain with Bitcoin’s bathwater’ – to reject the technology and miss opportunities to improve people’s lives (Howson, 2019). Future research must attend to nuances around blockchain’s impacts, acknowledging the gamut of possible emancipatory futures the technology might enable (Elsden et al, 2019). To ensure more equitable outcomes, there are multiple questions that critical researchers need to answer.

⁴ Cryptocurrency donations are converted locally to Ugandan Shillings before being transferred either using mobile money services or a traditional bank transfer.

What new subjectivities and motivations are driving crypto-giving globally?

The cryptocurrency and blockchain development industry is growing. As it does, new innovators, creators and crypto-millionaires will emerge with a willingness to improve people's lives in particular ways. Their interests and motives need mapping.

How might smaller, volunteer-led nonprofits avoid the surveillance philanthropy trap?

Larger charities, with the resources to ensure their interests are not subordinated by that of their donors, will undoubtedly see greater benefits from blockchain technology. Greater understanding of how the visions and missions of smaller charities change within the crypto-giving arena is required.

How can crypto-giving platforms be governed and regulated in the interest of beneficiaries?

For nonprofits, large and small, blockchain is problematic. Regulators are struggling to keep pace with blockchain innovation, leading to significant risks for charitable organisations, their donors and beneficiaries (Burcher, 2020). These risks need to be fully understood.

How is the growth in DeFi platforms changing the crypto-giving landscape?

The evolution of decentralised finance systems (or DeFi), which use cryptocurrencies to package together collateralised debt products, is rapidly creating new risks for nonprofits who engage them as a revenue stream. Tokens connected to DeFi debt instruments are already accepted by large nonprofits, including WWF, Oxfam and UNICEF. Many smaller organisations are following. Trees for the Future for example, uses the interest paid on DeFi token deposits using the rTrees blockchain application to fund tree planting & sustainable agriculture in Senegal (rTrees, 2020).

What models of best practice exist for driving equitable outcomes?

More place-based case-study research and practitioner engagement are needed to ensure the sector's funding is secure and innovative, without entailing significant risk for nonprofits and beneficiaries.

Blockchain will continue to offer new revenue streams for nonprofits large and small, with benefits for new donor engagement, organisational governance, and humanitarian assistance. This review has considered how these benefits of crypto-giving come with significant trade-offs. These platforms are able to cause radical shifts in sectoral power relations, brought about through 'surveillance philanthropy'. This surveillance ensures project funding fully reflects the interests of donors, whilst restricting nonprofits in meeting the dynamic and complex needs of project beneficiaries. And so, for the nonprofits naïve to the risks, crypto-giving offers a Trojan Horse.

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