Northumbria Research Link

Darkening Programmable Donations

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ABSTRACT

Around 2019, a group of researchers working with a large international charity, developed an innovative system for 'programmable donations'. Riding a wave of hype related to blockchain technologies, they envisaged a way to support conditional and data-driven giving. The researchers realised that they could use 'smart contracts' to create digital escrows that could securely hold an individual donation, which would only be released when specific data about real-world conditions was received. A number of commercial players were already looking at means to use similar technologies to hold charities to account, and make funding conditional on detailed impact reporting from the 'last mile'. However, this project had sought to flip attention to the 'first-mile' of giving, and donors own motivations and triggers for giving to charity. Although the system was developed carefully, with good intentions, this paper provides a speculative account of series of unfortunate events taking place years later, as the technology evolved and became misguided in various ways.

'Top 5' Programmable Donations

Below we provide a list of the most successful Programmable Donations since their launch in 2020.

'Break Down Barriers' - £6.2m pledged (4.8m released)
I will give [£0.10] (up to [£Y]) to refugee projects each time Donald Trump tweets about building the wall.

'Frequent Flyer' - £5.1m pledged (1.9m released)
I will give [£X] (up to [£Y]) to climate change projects for each 1000 miles I fly within a year - validated with our partner airways.

'Holiday Quake' - £4.2m pledged (£2..2m released)
I pledge [£X] to disaster resilience projects if a significant earthquake strikes [my holiday destination] within one year of my visit.

'A Drink to Your Health' - £3.1m pledged (1.7m released)
Give [£X] to clean water projects each time you spend £20 at [your favourite pub].

'World Champions' - £2.1m pledged (1.1m released)
Give [£X] to workers' rights projects for each goal [your team] scores at the 2022 Qatar World Cup.

INTRODUCING PROGRAMMABLE DONATIONS

Programmable donations are an emerging class of technologies that use distributed ledger technologies [4] to attach automated conditions and rules to charitable donations. In 2019, Elsden et al. [1] outlined one approach to these tools through the use of automated 'escrows' – an intermediary third-party account or wallet where donated funds are held and disbursed according to a predefined contract or rules. Using 'smart contracts' – tamper-resistant and distributed algorithms – it is possible to create trustworthy, automated, digital 'escrows' at scale. Collaborating with an international NGO, the researchers saw the promise of programmable donations to empower donors by giving them the opportunity to create rules and triggers for when they would give to charity.

The potential context and scope of these 'smart donations' was vast (see Side Panel). One could give at the instant a disaster took place; according to one's lifestyle choices; or to pledge ongoing support to a campaign or issue. Paying up-front, donors could pledge small, recurrent donations, or large one-off amounts; and could donate directly to a range of potential projects and beneficiaries. Crucially, the conditions of the donation required a trusted validator or data source to trigger the release of funds from the escrow. The donations also had an expiry date – at which point any remaining funds in the escrow could be returned to the donor or redirected to other causes.

By 2020, the concept of empowering donors through programmable donations had caught on, and was being offered by numerous charities in various guises. While attracting considerable donations to worthy causes, the real-world application of this technology revealed a broad range of ethical and practical quandaries. The most challenging of these are envisioned here.

A SERIES OF (PLAUSIBLE) UNFORTUNATE EVENTS

The Sumatran Collusion: Distrust and Desperation in Data-Driven Disaster Response

A primary appealing use case for programmable donations was to give depending on data-driven conditions that demonstrated real-world needs, and which necessitated a charity's intervention (and hence the donor's financial support). The theory considered that if donors could be made more aware and more directly connected to data that showed why their donation was important, they might donate more to those causes.

For example, one could pledge to give when particular disasters struck, or as evidence of a crisis came to light. This proved to be a popular way to persuade donors that their donation was urgent and necessary, while still allowing charities and international agencies the freedom to use the pledged funds as needed on the ground. As this approach become more widespread, partnering with organisations who could help provide rich and illustrative data about need became a core strategy to grow charitable donations. Where once charities might have relied on compelling imagery and media coverage to solicit donations, for a certain segment of donors they now required hard-hitting data. As crisis informatics [3] developed apace, some companies even specialized in providing donor-friendly disaster data to drive giving through programmable

donations. In the best cases, this greatly improved a charity's ability to monitor a situation, and report it not only to public donors, but also to other agencies and government actors. In other cases, it strengthened public awareness of trusted monitoring agencies. However, as the industry grew, in some cases charities would scramble to collect such data, and even withhold and compete with other NGOs rather than sharing it transparently.

This was the culture that ultimately led to the 'Sumatran Collusion' in January 2024. Following a series of moderate earthquakes, parts of the island experienced a large number of devastating landslides. Curiously, the initial data monitoring of the earthquakes and their impact fell short of triggering a large number of 'Pacific Disaster Awareness' pledges, to support in the case of such emergencies. The initial disaster relief efforts were therefore hampered by a lack of immediate funds. However, staff at a number of agencies were aware that on occasion, some of the monitoring centres could recalibrate their measurements. Curiously, four days after the quakes, two of these centres upgraded their initial assessments to such an extent that an additional $1.2 million relief funds were triggered from the funds held in escrow. Consequently, the agencies using these centres as data sources were able to provide far more effective relief – to the evident benefit of the local population. However, as the immediate humanitarian need receded, rumours circulated of botched data, and even explicit requests to examine alternative reporting measures. An inquiry is ongoing, and the long-term fall out remains hard to determine. However, a recent inter-governmental report has highlighted the monetisation and complex economies now surrounding crisis informatics as a fundamental concern to the sector, requiring a far greater level of oversight.

The Give.ly Affair and a Surveillance Charity Economy

As regular monthly donations to charity by direct debit continued to decline, some charities realised the need to be able to more accurately appeal to donors at particular moments in their life where they felt the need to be more generous. Hence, several successful programmable donations invited donors to give to charity based on personal events and everyday lifestyle choices. Increasingly, new streams of personal data could be leveraged to make such donations smarter and as seamless for the donor as a monthly bank transfer. Some donors related their giving to exercise; others sought to give whenever they ate out, booked holidays or travelled by car. Soon, whole teams inside some charities were responsible for managing integrations with individuals' personal data to support alternative revenue streams. This happened without fanfare or much attention, and in light of other practices in the age of surveillance capitalism [5], the convenience and opportunity to give in this way was an upside for many. However, two events transpired to raise alarm bells within the sector. Firstly, one significant charity fell victim to a data leak, and the extent to which some charities were exposed to their donors' personal data and behaviours became apparent. Secondly, a new wave of professional data-driven fundraising companies entered the market. Unlike charities themselves, they had less stringent standards for handling donors' data, and pressure from investors to generate a profit from their services. One of these intermediary companies – *'Give.ly'* – used location tracking and mapping techniques to develop compelling

offers related to popular tourist destinations. However, it emerged that *Give.ly* was also sharing that location data with travel companies and local merchants. The charities depending on these services were themselves aghast, but found themselves caught in a surveillance economy. In order to compete to provide users a seamless service, and novel fundraising opportunities, they had ultimately been naïve as to the business models that prevailed in the collection of personal data.

A Moral Decline?: The Donor is Always Right

Besides the specific scandals of the *Sumatran Collusion* and the *Give.ly Affair* programmable donations grappled with another more delicate difficulty. Conditional giving appealed to donors because this offered them greater control and engagement. In many cases, these conditions were presented as empowering the donor to act as a globally engaged citizen, through automated escrows. While most charities resisted efforts to make donations conditional on specific outcomes or impacts (a notorious challenge for charities [2]), there was nonetheless a competitive need to further and further engage with donors to make them feel valued. Inexorably, a trend emerged for charity-as-a-service. On occasion, the specific end cause and delivery of aid itself, was less significant than simply satisfying the donor's own motivations for giving to charity – any charity. By making giving to charity all that much more engaging, total donations had risen, especially amongst younger demographics and those on variable incomes. However, to maintain this, charities had to work increasingly hard to meet a donor's needs. Within the sector, old hands feared that the deeper values associated with giving were being eroded. The more that charities pursued a donor-centric model; the more that the end-purposes and approaches of many of these charities became opaque. While better donor engagement led to more funds in the short term, some within the sector felt that many global challenges remained further than ever from a solution. Programmable donations were the cutting edge of sophisticated fundraising techniques and proved hugely effective at extracting greater gifts from donors. Rarely however did they lead to the significant political or structural changes that many felt were necessary.

FIRST THOUGHTS ON 'EVIL ENVISIONING'

The 'CHI4Evil' workshop offers a playful space to engage in evil envisioning such as the above. For creatively minded researchers, we suspect this is a fun, reflective, but also a reasonably lightweight exercise. In concluding this position paper, we offer some initial thoughts as to possible directions for creative and productive speculation of the negative impacts of technology, which we hope can spark some discussion at the workshop.

   Measured Dystopia: In considering the negative impacts of technology, it feels all too easy to veer towards dark and terrifying dystopias. Without doubt, some contemporary technologies have produced horrifying realities. Nonetheless, how do we consider a gamut of possible futures, which tend towards productive critique and calling out real harms, without suspicion of hysteria or fostering a sense of powerlessness?

Identifying and Managing Risks: In this spirit of productive critique, how do we move from highlighting negative impacts, towards understanding and managing these risks? There are risks and potential negative impacts of many technologies we enjoy on a daily basis, but this need not exclude their use or value entirely. What methods and modes of communication do we have to develop a nuanced picture of risks, and ways in which they might be acceptably managed and accounted for (by end-users, providers, or other kinds of regulation).

Responsible Research Agendas: As research communities become more aware and sensitive to the potential negative real-world impacts of their work this begs the question of what researchers should actually then do as they recognize these risks. There is a fear that it becomes enough to label research as potentially harmful and then absolve oneself of how others pursue that agenda. Many of us desire our work to be impactful in some way – what responsibilities do we have to this impact – especially when it extends beyond a particular known community, to a more abstract public? Equally, there are limits to how far a researcher can be responsible for future interpretations of their work, and challenges to a research practice which demands constant awareness of potential real-world applications. We thank the organisers of this workshop for facilitating a venue to begin discussions to address these kinds of questions about our research.

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