Configuring Money as an Interface

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This workshop will tackle the challenge of designing and configuring money as an interface, exploring and developing an HCI-centred perspective on the nature of money. Money as an interface involves moving beyond classical economic ideas, to focus instead on money as a social technology, on its relational qualities, and on how these could be expressed in design, and configured in context. The workshop will bring together HCI researchers, designers and practitioners, who will submit design contexts in which more configurable, flexible and collaborative forms of money would be desirable or socially meaningful. These contexts will become the design provocations to be addressed together during the workshop. The outcome will be a catalogue of design proposals inspiring future directions for more flexible, configurable, collaborative and relational financial technologies.

CCS Concepts: • **Human-centered computing → Human computer interaction (HCI)**.

Additional Key Words and Phrases: Money; Design; Social Meaning of Money; Appropriation

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1 Motivation & Background

HCI research has a long history of studying interactions with money as they are increasingly digitally mediated (e.g. [3, 5, 9, 13, 15, 21, 22]). A consistent theme of this work is the way in which the meaning and use of money is socially situated, and often requires artful and careful 'moneywork' to make money 'work', whether managing finances in the home [22], managing loan payments and collections [7], or helping others manage their money better [3]. However, it

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is also clear that despite digital systems emphasising the convenience, visibility and speed of transactions, moneywork often involves working around, rather than working with, financial systems; and that that these systems are not ultimately well designed, or adaptable to particular contexts or circumstances.

Relatedly, many scholars have recognised how money and especially payment systems can be understood as a kind of media and form of communication [18, 23]. For HCI researchers and interaction designers this invites consideration for the qualities we require from money as an interface. As a starting point, and through their work at the intersection of mental health and financial difficulty, Barros Pena et al. have proposed that money interfaces should enable *flexibility*, *complementarity*, *appropriation* and *collaboration* [1, 2].

However, from a design perspective, the need for this kind of work and interaction with money is often at odds with how money systems and infrastructures are typically engineered and regulated. Modern money emphasises most of all fungibility, convenience, speed and efficiency of payments and transactions. End-users are assumed to be uniformly economically rational actors, for whom managing money is a solely economic concern. In this way, there is a flattening of any nuance, or social meaning that certain 'special monies' [23] might have. In economic terms, all money can be made equal. Money systems are increasingly surveillant [12], and oriented towards managing risk, with emphasis on an individual's responsibility for their financial management [7]. To this end, personal banking systems are fundamentally designed upon the basis of individual identities, and individual accounts – despite the necessarily social nature of how people manage money. In addition, with the exception of joint accounts (which are themselves a very, and perhaps overly, trusting form of financial collaboration), there is little support for more nuanced, temporary, *situated* forms of financial collaboration, and a lack of granular tools to do so (e.g. temporarily delegating access to an account, or allowing certain shared transactions and not others). Instead, banks and financial institutions will emphasise security and regulatory compliance, rather than always meeting customers true and often complex needs. While a focus on security is understandable, in practice, we know that without better alternatives, many individuals will often act in ways that are potentially risky or fraudulent – for example by sharing bank cards, PIN numbers, or acting on behalf of vulnerable relatives [20].

The literature and evidence of these challenges has by now been emphatically demonstrated by HCI and design research. The most recent money-related workshop at CHI 2025 demonstrates the sustained interest in money and FinTech within the HCI community. However, **what is lacking is the ability to translate these insights into actionable principles, approaches and patterns to design money and money systems differently**. As a community, we have lots of detailed cases and examples; and can draw on many general theories about how people think, act and communicate in relation to money – but very little in between to relate and materialise links between theory and situated actions. In terms of design knowledge, Höök and Lowgren identify this gap as 'intermediate-level knowledge' [8] – which is able to map across multiple particular cases and instances, without being so abstract or difficult to operationalise as general theory.

In proposing this workshop, we believe there is much more we could do as an HCI and design research community to address this gap; and support practitioners in experimenting with and implementing money interfaces that are more flexible, configurable, and appropriate for use in particular social settings.

2 Configuring Money Systems

Traditional money systems can be a fundamentally challenging domain for design. They are highly regulated, often based on large legacy infrastructures, pose significant potential security concerns and there is a lack of incentives (or regulation) for banks to support customers at the margins.

Despite conveniences of a digital economy, many concerns have been raised around cashlessness and demonetisation in particular [16, 19], especially for vulnerable and less affluent users. Besides from the risks of surveillance, and financial exclusion, one particular quality of cash is the way it could be appropriated and configured in ways that fit the social setting. Indeed, without cash, individuals lack a form of money that can be held outside of a bank account [4]. In Zelizer's classic work on the 'social meaning of money' [24], the practice of 'earmarking' and physically setting and designating certain kinds of money apart is deemed an essential kind of moneywork. The recent introduction of 'Pots' in some mobile banking interfaces is an attempt to replicate this need. Considering other simple and deeply social interactions with cash – such as tipping, making a shared 'kitty, or even a coin toss (where cash is appropriated as a game of chance) – the limitations of traditional banking systems become apparent.

Yet, financial innovation in recent years has opened the door a little wider for designers to consider money as a material for design [17]. New 'challenger' banks such as Monzo describe themselves explicitly in data-driven terms, as a bank which is an API (Application Programming Interface). Hand in hand with the turn to Open Banking [1], this positions banks as not only storing money, but data; for this data (and hence money) to become programmable [5]; and to be a platform providing many new financial services based upon this data. Similar logics are at play in many of the imaginaries related to cryptocurrencies, tokens [6, 11] and smart contracts, which (in theory), promise highly bespoke, programmable forms of value exchange. (e.g. GeoCoin; Smart Donations).

Likewise, we see how virtual and platform currencies, in games such as Roblox or Fortnite, and on streaming platform Twitch, are designed to perform many of the communicative functions of money [6]. Critically, much like casino chips, these virtual currencies are usually carefully delineated from traditional fiat money, and instead framed in terms of a purchase for a service or good, and hence escape some of the constraints of financial regulation. The uses of mobile phone credit as a form of currency [10] and basis of exchange shows distinctly how value represented in one way, can be appropriated and configured locally with new meaning.

Of course, all of these technologies and systems present their own challenges. Clearly, in the context of fraud, abuse or money laundering, such appropriation and deregulated forms of money can be deeply problematic. However, within appropriate constraints, **better enabling individuals to configure different kinds of money in different ways seems essential** for money to fulfil its fundamentally social purpose. These examples helpfully point to the way that technically, digital forms of money are becoming increasingly configurable, less bound by the limitations of specific payment rails, and the potential to learn from the kinds of socio-economic innovation taking place around their usage. In this workshop, we seek to address the design contexts in which people need more configurable forms or money, through some of the technologies and approaches described here.

3 Length and Size of Workshop

This *long* workshop, over two 90-minute sessions, invites the CHI community to consider how, and to what ends, money systems could be designed to be more flexible, configurable, and appropriated for use in particular social settings. Thinking in terms of the modularity and interoperability of systems such as IKEA furniture, Lego, open source software, and indeed the open-ness of financial tools and systems on Twitch [6, 14], we seek to explore the challenge of **configuring money as an interface**. While base financial standards, infrastructures and operating systems will inevitably remain, we seek components, affordances, qualities and interactions with money that could be designed through contemporary FinTech, and appropriated and adopted for the situated moneywork at hand.

[1] https://www.openbanking.org.uk/

We expect this to be a small workshop - with 10 to 20 participants, plus organisers.

4 Organizers

Chris Elsden is a Chancellor's Fellow in Service Design, in the Institute for Design Informatics, at the University of Edinburgh. He primarily employs design research and speculative methods, to explore the evolving social meanings of digital monies. His most recent research programme has examined how children and their families experience and learn about digital money. He has published multiple papers at CHI related to money and digital currencies since 2018 and has previously led the organization of CHI workshops on Personal Informatics (CHI 2015) and HCI for Blockchain (2018). He is co-leading the organization team with Belén Barros Pena.

Belén Barros Pena is a lecturer in HCI at City St George's, University of London. Her work has examined the design of financial technologies and the implication of digitising our financial lives, in close collaboration with excluded and underserved citizens. She has published on the subject of financial technologies at CHI and other ACM and design venues. She has previously co-organised workshops at the DIS (2020) and ASSETS (2024) conferences.

Helena Lyhme is a PhD candidate at the Centre for Human-Computer Interaction Design at City St George's, University of London. Her research, which she presented at the CHI 2025 doctoral consortium, explores the intersection of financial technology and neurodiversity.

John Vines is Chair in Design Informatics at the University of Edinburgh's School of Informatics, and co-director of the Institute for Design Informatics. His research explores the social implications of digital technologies, and is underpinned by participatory methods and Research through Design. He has conducted research at the intersections of HCI, design and financial services for the last 15 years, working on a number of projects exploring the design of banking services with various marginalised user groups and communities. He's co-organised workshops at CHI (2025) and CSCW (2015) on digital money and banking, as well as co-organising a series of connected workshops between 2013 and 2016 on HCI, ethics and vulnerable communities.

Jeff Brozena is a PhD candidate in the College of Information Sciences and Technology at the Pennsylvania State University. His research investigates how financial technologies can support the unique financial challenges faced by those living with bipolar disorder and their care partners. His current work aims to understand how personal financial data can be modeled to serve as an early warning sign of illness state and ultimately inform the design and development of digital health interventions targeting measures of impulsivity. He has published on these topics (CHI 2024) and has organized a related workshop (CHI 2025).

Daniel Mwesigwa is a PhD candidate in Information Science (with a minor in sociocultural anthropology) at Cornell. He studies the design and governance of sociotechnical systems, as well as their societal benefits and costs. He has studied how AI-driven credit infrastructures and mobile money platforms have longer histories in informal practices of value exchange and risk sharing, generating policy and design interventions. He was most recently an affiliate of the Berkman Klein Center for Internet & Society at Harvard (2020 - 2024), where he studied the role of AI infrastructures in global development.

Jofish Kaye is Principal Research Scientist and Executive Director at Wells Fargo in Strategic Design and Innovation. His research explores the social and cultural effects of technology, as well as how behaviors, needs, and customs can inform the development and improvement of those technologies. He has served on the ACM Diversity & Inclusion Council, the SIGCHI Executive Board, and co-chaired CHI '16. He has published papers on personal finance tracking and collaborative financial interactions, and co-organized two previous CHI workshops focusing on digital money and financial activities.

Chris Speed is Professor of Design for Regenerative Futures and Director of the Regenerative Futures Institute at RMIT, Melbourne. His research explores money as a design material, examining how digital currencies, blockchain technologies, and transactional data can empower citizens and reshape creative economies. Chris has co-authored extensively on designing futures of money and FinTech. Previously Director of Edinburgh Futures Institute and the Institute for Design Informatics, his work investigates the intersection of design, data, and value creation.

5 Publishing Plans

The workshop is focused on collaborative design work, rather than generating publishable academic outputs. We will use a streamlined submission process through a web-based form, where prospective participants will be asked to submit a design context related to their research to be explored during the workshop, and / or a summary of their relevant prior work or interest in the workshop subject. The collection of submitted design contexts will be published on the workshop website (domain to follow) and a sustainable academic repository such as Zenodo (https://zenodo.org/).

6 Workshop Activities

(1) **Introduction and allocation of design contexts (Duration: 45 minutes)** Through the workshop submission process, we will collate a set of design contexts where flexible and configurable money would be beneficial. The workshop will open with participant introductions and a round of presentations to explain the collated contexts. Participants will then allocate themselves to the two contexts they would like to work on for the remainder of the workshop.

(2) **Design Round 1 (Duration: 45 minutes)** Participant groups will be formed based on participants' first choice of design context. During 45 minutes, groups will work collaboratively to consider what kinds of configurations of money systems could address their chosen context, specific functions / affordances required, and potential ways they could be technologically enabled. For example, a design context may state that children under-12 require money that they can spend in a digital economy, but which retains some tangibility, does not require independent access to a personal device, helps them recognise how much money they have, and how the cost of something they want to buy compares to the money they have available. In such context, functions and affordances required may include: 1) representing digital money in a physical way; 2) showing relative quantities; and 3) enabling earmarking. These functions and affordances could be technologically enabled through modular hardware with access to transactional and account data. Groupwork will be documented in a paper canvas format, mapping out the problem space for each context and initial concept ideas and possible design patterns in response.

(3) **Break (Duration: 15 minutes)**

(4) **Design Round 2 (Duration: 45 minutes)** After a break, new groups will be convened based on participants' second choice of design context. The process of Design Round 1 will be repeated for the second context, with outcomes once again documented in a problem space canvas.

(5) **Wrap-up and reflection (Duration: 45 minutes)** The last 45 minutes of the workshop will be dedicated to brief presentations of the groupwork and generated canvases, discussion, reflections and next steps.

By the end of the workshop we aim to have developed:

- An initial catalogue of contexts where configurable forms of money that can be better situated in local needs and resources are relevant and necessary.
- A set of proposals, patterns and concepts for how each context could be addressed through design, including new FinTech-enabled interactions and services.

7 After the Workshop

The workshop team will compile and publish these contexts and proposals in a suitable format, to summarise and widely disseminate the workshop outputs in an accessible format, within academic and industry contexts. These will be hosted on the workshop website and disseminated widely via organisers' networks including user experience and service design practitioner organisations in the UK, designers working in financial services, and design education programmes. Taken together, we intend that contexts and proposals will identify opportunities for further collaborative research; inspire future work by academics, practitioners and financial innovators; and directly inform the design of *money as an interface.*

8 Accessibility

We will pay due attention to the accessibility of any tools (e.g. website, submission form) and materials related to the workshop. The workshop submission form will include a question about required accommodations, through which prospective participants can notify the organising team of any particular needs and requirements. The organisers will strive to facilitate and enable any required accommodations to the best of their ability. We acknowledge that the groupwork and paper documentation approach chosen for this workshop may be challenging for some. We commit to work together with those impacted by these challenges to address their concerns, reduce barriers, and facilitate meaningful participation. In terms of geographical representation, we particularly recognise the valuable contribution of colleagues from the Global South to HCI research on money. Every effort will be made to encourage and enable participation across geographies.

9 Offline Materials

Given the collaborative and practical nature of the workshop, the sessions will not be recorded. However, the catalogue of submitted contexts and the collection of problem space canvases developed during the workshop should provide rich materials and sufficient documentary evidence of the scope and outputs.

10 Call for Participation

This workshop will bring together HCI researchers, designers and practitioners to address the challenge of *configuring money as an interface*. We invite prospective participants to tell us why they are interested in configurable money interfaces and describe any relevant prior work; and/or submit a context in which users are required to adapt and configure money in some way. These contexts will become design challenges to address together during the workshop. Descriptions of these contexts can consider:

- The core needs / challenges and social nature of money in the submitted context.
- How money was previously configured in this context.

- The ways in which current financial systems do or don't support the need for configurability in the submitted context.
- The workarounds and approaches people take to achieving this now.
- Opportunities / imagination for how this could be made more configurable in the future.

Examples of challenge contexts from our own research include: managing children's money; joint accounts in the context of financial abuse in intimate relationships; and financial delegation in family care contexts.

During the workshop, each participant will briefly present the challenge context, and then collaborate to consider what kinds of configurations of money and systems could address the challenge context, and potential ways they could be technologically-enabled. The workshop will deliver a catalogue of contexts where *configurable* money is required; and a set of design proposals that address those contexts. The workshop team will compile these outputs and publish them for dissemination to inspire future work that delivers on the vision of money as an interface.

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