



Extended Abstract

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Introduction

We have heard much about the potential of networked communications to design alternative monies and payment systems in recent years. Innovations such as cryptocurrencies, peer-to-peer lending schemes, mobile remittance and microfinancing solutions are often presented as technical fixes to many of the problems associated with money proper: “Can’t gain access to affordable credit? Suffering the fallout of a commercial banking crisis? PayPal blocked your account because they don’t like your politics? There’s an app for that!” The potential for technical innovations to make our money otherwise or to support the collective management of money is exciting, but this paper looks at the convergence of networked ICTs and the future of money from a different perspective. Alongside these grassroots innovations in money, many powerful stakeholders in the communications space such as Internet service providers, mobile network operators and social media services are expanding their interests towards money. The landscape they are helping to shape is a very different to the one imagined by peer-to-peer and money activists.

Mobile Money

This is particularly so in the case of mobile networks, where financial services are growing in significance. These include mobile payments, marketing, transfer services and banking facilities of different kinds. The shape these services take is very different in developed and emerging markets. In emerging markets, for example, mobile money services are already well elaborated, provisioning microfinance, loans, payments and remittances often in the absence of traditional financial actors such as banks. These include airtime trading and mobile money services like M-Pesa and Smart Money in the Philippines. More recently, technical advancements are also driving the growth of mobile payments

in developed markets. These innovations include Near-Field Communications, Bluetooth Low Energy technologies and Hosted Card Emulation as well as the design of mobile wallets and point of sale innovations from companies such as Square, Apple and PayPal.

Telecommunications are the new banks

Our money now rides the 'rails' of mobile network infrastructure. Historically informational networks have always acted as bridges for cash, from cash carriers and pneumatic tube systems through to the histories of American Express and Western Union - a postal services and a telegraphy service respectively who turned from the transmission of messages to the secure transmission of currencies. But today this situation has intensified as communications networks build portals onto existing networks for financial transactivity. Telecommunications companies, mobile network operators, handset and hardware manufacturers, operator billing providers, software providers and social media platforms all play a significant role in the future of electronic and specifically mobile payments. Communications firms are developing their own payments propositions, going so far as to issue private currencies and new money-like instruments or even acting as de facto banks in some emerging markets. These examples include the issuance of phone credit as currencies, tweets as peer-to-peer cash transfers and Snapchat's easy money transfer system Snapcash.

What are the implications of this convergence for the culture, political economy and governance of future monetary systems, when agencies that control the flow of information now also control the flow of value? How will the political economy of mobile networks- from algorithmic systems, through to handsets and radio access infrastructure - shape the geography of access in the mobile payments space and, in turn, the future of money?

Methods

While providing a broad overview of the political economy of the mobile payments space, this paper will focus on one core aspect of mobile money in developed markets: the aggregation and monetisation of transactional data by mobile network operators. The paper explores how this practice of data-capture is facilitated by existing enclosures and sociotechnical infrastructures in proprietary mobile networks, demonstrating how this in turn leads to new modalities of control over mobility, work and life. This falls within the remit of broader enquiries about the monetisation of user-generated data and content in the Internet and social media platforms, focusing specifically on those that are produced through monetary exchanges.

Gateways, transactions fees and data monetisation

Questions about the interrelationship of user-generated data and money are very significant within the context of mobile services in the Global North, where advertising (particularly location based services), data monetisation and cross-selling revenues have become more significant than fee-based revenues. As society becomes 'cashless', companies have a larger business, and a more valuable one, in closing the loop for offline transactions and helping deliver customers' to advertisers. Mobile network operators are looking to incorporate advanced data analysis into new payment innovations, capturing transactions at the point of sale. In a similar model to the 'follow the free' dictum of the platform web, linked payment data associated with a financial transaction is now much more valuable than direct payment for that service through a denominated currency. Instead, new modes of exchange such as airtime and data are the more valuable currencies of the mobile network.

One such example is WEVE, a joint venture comprising three of the United Kingdom's four key network operators, EE, O2 UK and Vodafone UK and focused on combining the capabilities of advertising with mobile payments. Services include an interoperable mobile payments wallet, mobile marketing campaigns and targeted location-based services. The Boston-based company JANA develops a different model: while relying on user data and attention, JANA pays mobile phone customers in the operator's currency of choice - airtime credit, in return for consuming and paying attention to branded content.

Conclusions

The effects of these systems are far-reaching. The most obvious is the introduction of targeted advertising and location-based services informed by transaction histories. In virtualising money, non-cash payments materialise previously latent informational traces of who transferred money to whom and in exchange for what. The managers of the bit-pipe can monetise these traces, but there are other far-reaching effects to the wealth of data from consumer transactions. We can identify implications beyond simply being pushed unwanted recommendations or location-based services. Indeed, monitoring purchasing information underpins new forms of governmentality in both online and offline spaces. And the effects of such scrutiny will be unevenly distributed - for example, individual purchase tracking of low-income families or of individuals who have claimed bankruptcy or insolvency.

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