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# Money's new abstractions: Apple Pay and the economy of experience

Nathaniel Tkacz

## Abstract

This article draws on insights from digital media theory and design methodology to contribute to sociological and anthropological understandings of money. It postulates the rise of a new money-form, or rather money-forms, referred to (in the plural) as *experience money*. The notion of experience money is developed through an analysis of Apple Pay, where I suggest that experience contains both economic and design qualities. Experience, that is, is both a way of thinking about and producing value, and a set of concrete design techniques for realising such value. Each instance of experience money therefore embodies a distinctive 'value proposition' – an experience value, if you will – which forms the basis of differentiation and competition. While there is a vast literature dedicated to troubling and challenging the modern accounts of money and economy in terms of abstraction – from anthropology to economic sociology, social studies of finance or even behavioural economics – experience money poses new challenges for these empirically-nuanced theories of money. Experience money performatively incorporates and recodes the diversity and specificity of money and monetary practices as described by sociologists and anthropologists. It participates in the critique of (modern) money as abstraction, but it by no means does away with abstraction. The article concludes with a reflection on what money's new relationship to abstraction entails for how we study economy.

## Keywords

Experience; Apple Pay; Money; Payment; Abstraction; User Experience; Platforms.

## Introduction

A full house at the Flint Center for the Performing Arts in Cupertino, California, clap with anticipation as Tim Cook strolls back onto the stage. The Apple CEO and his team have just finished introducing the iPhone 6. It is September 2014. 'And now I'd like to talk about an entirely new category of service', he moves back and forth with a concentrated posture, 'and

it's all about the wallet' (see Apple 2014).<sup>1</sup> A bulky black leather wallet appears on the wall-sized screen behind Cook. The wallet is so full that its contents prevent it from completely closing and a few items are visible, including a Bank America card and some unruly 20-dollar bills. A broad smile opens up on Cook's face and the audience gives a rapturous applause. 'Our vision', he continues, 'is to replace this ... and we're going to start by focusing on payments'. The audience is given a quick overview of the payments industry in the US: 'Every day between credit and debit we spend 12 billion dollars. That's over three trillion a year, and that's just in the United States. And this business is comprised of over 200 million transactions a day'.

There's a notable change in tone as Cook moves from this overview-mode to give his thoughts on payments: 'That's 200 million times we scramble for our credit cards, and go through what is a fairly antiquated payment process. It looks something like this...'. A short video begins on the screen, depicting a woman making a store purchase with a Visa bank card. The woman places her handbag on the counter and clips it open. The clip offers resistance. Her hand goes in. It fumbles around, moving items out of the way – a leather case, a packet of Tic Tacs – before she locates her purse. She places the purse on the counter and unclips it. Now open, the purse has three visible sections. One is zipped, for storing coins; the other two are comprised of slots for holding cards. There are eighteen slots in total, each with a card. With some difficulty, the woman pries out her Bank America Visa card and offers it to the sales assistant, upon which she is prompted to present her ID for inspection. As the scenario develops, the video is edited into a sequential montage, comic book-style, collecting and freezing different stages of the payment scenario. The ID is handed over, verificatory glances are exchanged and it is returned. The sales assistant is ready to process the payment.

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<sup>1</sup> All subsequent references to Cook are sourced from the launch. The segment begins at the 43-minute mark of video.

She swipes the card through the card reader but the first read fails, returning an off-tone beep. Glances are exchanged once more. A second attempt is successful and the card along with a large paper receipt are returned to the woman who places the card back in her purse before accepting the goods. In the end, the audience is presented with a six-step payment montage resembling a storyboard.

<<INSERT FIGURE 1 HERE>>

Figure 1. Screenshot of payment scenario video at Apple launch event.

On the back of this somewhat elaborate clip, Cook now launches an attack on the bank card as payment technology:

This whole process is based on this little piece of plastic, and whether it's a credit or debit card we're totally reliant on the exposed numbers and the outdated and vulnerable magnetic stripe interface – which by the way is five decades old. And the security codes, which all of us know aren't so secure. It's so easy to lose your card or have it compromised.

Cook acknowledges that many others have tried and failed to create a mobile wallet which gains a foothold in the payment industry. 'Why is this?', he ponders,

It's because as it turns out most people that have worked on this have started by focusing on creating a business model that was centred around their self-interest, instead of focusing on the user experience. We love this kind of problem. This is exactly what Apple does best.

The scenario of the woman making a store purchase is reintroduced but now a new product, Apple Pay, is mediating the exchange. The clip now begins with the sales assistant announcing the total: '\$23.78'. The woman holds her iPhone up to the wireless reader, with her thumb positioned on the phone's fingerprint reader. A short bleep sounds. '*That's it!*', shouts Cook triumphantly. '*That's it!*', once more. He panders to the audience: 'Would you like to see it again, just in case you may have blinked and missed it?'. He plays it again.

What is going on here? Ostensibly, this is a product launch but there are many ways to launch a product. What is the rationale for launching a product *this* way, on the basis of two competing payment scenarios? Since the launch of Apple Pay in 2014 was Apple's first foray into payments there were no previous models or versions within Apple's own catalogue from which to differentiate its latest offering, as is typical when new phones, tablets or laptops are launched. Not only were there no previous Apple products from which to (implicitly) compare, Apple had no experience in the retail payments industry. Recall that Cook had to introduce the payments industry to the audience before he introduced the product, almost as if a business case was needed to convince the audience of the legitimacy of what was to follow.

In one sense, what followed, what was *going on* in the two clips is a quite literal demonstration of what Cook means when he says that Apple focuses on the user experience. If we are to believe the narrative, the first clip, with all its micro-inconveniences, is a scenario of bad experiences – a world where numerous poorly designed products work against the woman as she tries to make a purchase. The second clip is what results when the user experience becomes the focus; that is, when payment is recast on the terms of experience. Leaving aside the narrative component, both clips are also presented in a way that resembles the design methodology of 'user journeys', which will be elaborated further later. Cook says it's about user experience, he offers a narrative demonstration to show the value of experience, and this narrative develops through a journey storyboarding method commonly used by designers of user experiences.

In another sense, though, Apple is providing a more general and overarching rationale for entering payments in the first place. It is not only that Apple Pay will succeed because Apple is good at user experience. The more general point is this: Apple is able to enter the payments industry because payments are actually about user experiences. The two clips not

only aim to establish the superiority of Apple Pay over the card-purse-bag ensemble as competing payment technologies: they serve to establish the validity of seeing everyday financial activities – anything connected to a *wallet*, by Cook’s admission – as a matter of experience. While the specific case of Apple Pay will remain the focus of this piece, it does so as a way to explore this broader development: the full spectrum of everyday financial activities are being reimagined on the terms of user experience design; they are now a matter of *experience*.<sup>2</sup>

To be clear, the point isn’t that Apple is making for better experiences in the payments industry or anywhere else. Nor is this a question of how people actually make payments, how they actually use Apple Pay, or even how they understand what kind of experience they have when they do so. It isn’t even about the feasibility of two clips. Of course, there are obvious criticisms to be made about the competing scenarios Cook presents to his audience. We could inquire about the omitted steps in the second clip featuring Apple Pay. We could ask where the phone that appears magically ‘ready to hand’ comes from, and why it isn’t treated with the same backstory as the bank card? Presumably it too belongs in the woman’s handbag, which wouldn’t be any easier to open upon the retrieval of a phone. We could ask why the receipt is no longer provided or why the goods aren’t handed over in this second clip. We could also point out that Apple Pay introduces technologies into the payment process that could just as easily fail in ways similar to the swipe card reader. Anybody who has used Apple Pay has likely experienced issues with the wireless transaction – the Near Field Communications technology does not always work or can ‘activate’ at the wrong times – or with the fingerprint scanner, which tends to discriminate against sweaty,

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<sup>2</sup> Note: In March 2019 Apple launched an expanded set of financial products including a new consumer credit product, the Apple Card. The credit card is designed to work with Apple Pay, but also includes a dedicated titanium card that can be used separately. While the metal card is an obvious concession to replacing the wallet, it does not undermine the idea that everyday finance is being reimagined on the terms of experience design. Indeed, Apple’s return to the credit card is better understood as a (postdigital) *extension* of everyday finance as experience.

moist or greasy fingers. We could also add that Apple Pay is entirely dependent on the device's battery power, or that it is equally dependant on the infrastructures that support it. Apple Pay can only be used where it is accepted. Indeed, we could push back even further to consider the broader societal implications of the advance of payment technologies as writer and money critic Brett Scott has repeatedly and forcefully done (2018, 2017b, 2017a, 2016). There are indeed numerous issues with Apple Pay and with digital payments more generally.

But in considering the *how* of Apple Pay's launch I'm less concerned with its rhetorical shortcomings and sleight of hands, on the broadly overlooked, or on the persistent merits of cash, and much more interested in the *positive picture* being presented by Cook, what I will come to call the *value proposition* of Apple Pay as a type of experience money. Furthermore, and in keeping with the theme of this special issue, I am interested in exploring what kind of abstraction is taking place with technologies such as Apple Pay, and how the abstractions of experience money differ to longstanding sociological and anthropological accounts of money as either abstract or embedded; and ultimately what money's new abstractions mean for how we conceive of money in the present, as well as its future possibilities.

#### *Abstract money, embedded money, appified money*

If abstraction was a major theme of modernity, the analysis and exploration of such abstraction often took place through money and closely related economic practices (Simmel 2011; Schumpeter 2010; Marx 2004; see also Ingham 2004; Polanyi 2001). In these accounts, the nature of the relationship between money and abstraction varies considerably and is often multi-faceted. Marx's account of money as abstraction, for example, begins with a discussion of gold. Gold becomes money, he contends, when it jettisons its commodity-ness to act 'as a

universal measure of value' (Marx 2004, 188).<sup>3</sup> That is, money only comes into being through the abstraction of the specific into the universal. But the plot quickly thickens, as Marx adds that it isn't money that makes things commensurable through its ability to act as a universal measure, but rather the *a priori* commensurability of commodities that allows them to be expressed quantitatively through money. This quantitative *a priori* turns out to be human labour, or specifically, 'labour-time' (Marx 2004, 188), and thus money is an abstraction of an abstraction.

Similar to Marx's historical materialist approach, Simmel sought in money a way into 'the great uniform trends of historical life' (Simmel 1991, 30–31). But departing from Marx, Simmel's approach was to flip the relation between the economic and cultural such that 'the money economy, no matter how much it appears to follow its own purely internal laws, nevertheless follows the same rhythm that regulates all contemporaneous movements in culture' (Simmel 1991, 30). Thus, when Simmel writes that '[money] rises in a very abstract elevation over the whole broad variety of objects' and 'becomes the centre in which the most opposing, alien and distant things find what they have in common and touch each other', we are invited to read money's abstraction less as a specific quality of money, nor as a stand in for another abstraction (labour) but as a reflection of 'modern culture' in general. Indeed, this is precisely how Simmel opens his classic essay on 'Money in Modern Culture', where the modern era is distinguished from the Middle Ages initially through the *unbinding* of a person from their community or estate. In the most general terms, Simmel describes modernity as a becoming 'mutually independent' of subject and object, where the former 'interdependence of personality and material relationships ... is dissolved by the money economy' (Simmel 1991, 18). Money does this, in Simmel's account, through 'foster[ing] a distance between personality and property by mediating between the two' (Simmel 1991, 18). And while this

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<sup>3</sup> This discussion of gold and money rehearses commodity theories of money.



separation had a liberating effect on people (who were no longer tied to community, land, material relationships, etc.), money also came to mediate how people evaluate their realities more generally. As Bill Maurer comments, in Simmel's writings people were left 'with nothing but money itself with which to evaluate and judge the social and natural worlds around them' (Maurer 2006, 19).

These comments are taken from Maurer's own general review of modern and contemporary anthropological approaches to money, which begins by criticising anthropologists for too often retelling the (modern) narrative of Polanyi's 'great transformation' – a narrative in which the abstraction or 'disembeddedness' of money is both 'cause and consequence' of the transformation (Maurer 2006, 19). The typical narrative is a morality tale whereby 'money and the violence of its abstractions erode the sociability subtending human existence, and the very idea of society itself' (Maurer 2006, 19). While Marx, Simmel and Polanyi are by no means commensurable, each can be used to weave a tale about the ambivalences of (modern) abstraction.

Countering these abstract, disembedded, or general-purpose accounts of money, are a number of approaches that pay attention to the 'embeddedness' of modern forms of money and related practices (Granovetter 1985; Appadurai 1988; Zelizer 1997, 2010, 2009; see Keister 2002; see Maurer 2006, 2005; Guyer 2004; Callon 1998). The notion of embeddedness is drawn from Mark Granovetter's (1985) influential work, where he argued for a balance between the 'undersocialized' explanations of economic behaviour and what he considered to be 'oversocialized' explanations, where economic determinism is replaced with equally deterministic social structures.<sup>4</sup> Through the notion of embeddedness, Granovetter called for analyses of 'economic behaviour' that paid attention to the specificity of context. Buyers and sellers build relationships, reputations and dependencies over time, for example.

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<sup>4</sup> The term originally comes from Karl Polanyi (2001)

Here, embeddedness is used as a foil for the rationale, atomised, and indeed abstract individual of neo-classical economics, but also the abstract spectre of social structure. In a similar fashion, Viviana Zelizer challenged the abstract nature of modern money directly – and the perceived fungibility deriving from it – through her analysis of ‘earmarking’ (Zelizer 1997). Put simply, people ‘mark’ money in different ways, investing it with different meanings and functions, which affects corresponding use. ‘Where the money comes from’ Zelizer adds, ‘in what form, and how, strongly affects how people actually use it’ (2010, 89). Money won gambling or an unexpected tax return may be departed with more easily than regular income, for example. Granovetter and Zelizer have contributed foundational insights to what is now an established approach with many further nuances than can be covered here. For convenience, any approach that pushes back against money’s perceived abstract quality, whether in terms of memory, meaning, materiality, diverse uses, social ties or cultural significance, I group under the term ‘embedded’.

If these studies approach money through a rejection of money as abstraction, more recent ones and in particular those associated with social studies of finance attempt to hold money (and finance) as both abstract and embedded together. One way of reading the more influential work in this field is precisely as an embedded approach to abstraction (Mackenzie 2008; MacKenzie 2009; MacKenzie, Muniesa, and Siu 2007; Zaloom 2006; Ho 2009; Knorr Cetina and Bruegger 2002b, 2002a; Cetina and Preda 2006).<sup>5</sup> Indeed, once one turns to the flows of money through global financial networks and related practices of high-frequency and automated trading, it is difficult to see how the empirics of money can be divorced from abstraction. Even the humble bank account and debit card are constituted through multiple monetary abstractions and ‘transubstantiations’ (De Jong, Tkacz, and Velasco González

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<sup>5</sup> In her contribution to *The Sociology of Financial Markets*, Saskia Sassen is explicit about this embedded approach to the study of global capital markets (Sassen 2006).

2015, 265). What I am interested in, however, is not whether or not money and finance are floating above a somehow more real economy, but on a specific development of monetary abstraction, what I will come to call *embedded abstraction*. I am interested in a new kind of abstraction that technologies such as Apple Pay carry along with them. These abstractions are not reducible to their modern ('great transformation') variant and, as we shall see, also complicate accounts of money as embedded. These new forms of abstraction can be observed by turning to world of phone applications or 'apps'.

In the last decade, a whole suite of payment apps have appeared in different parts of the world: from M-PESA in Kenya to the social payment app Venmo in the US; from Alipay and WeChat Pay in China, to Android Pay, Apple Pay, or Samsung Pay in other regions. But a canvassing of any major app store reveals much more than the many new ways to pay (Maurer 2015). In addition, there are apps dedicated to alternative currencies (Bitcoin Wallet, BitPay, Blockchain Wallet) and apps specifically for remittances (Azimo, TransferWise, Wave, Opal, WorldRemit, Western Union, PayPal); but also 'wallet' apps (Google Wallet, Apple Wallet, Blockchain Wallet), apps for budgeting and monitoring spending (Monefy, Thriv, Spending Tracker), traditional banking apps (UK examples include: Barclays, Santander, Lloyds, HSBC, etc.) and the new generation of 'challenger' or 'smart' banking apps (examples operating in the UK include: Monzo, Revolut, Monese, Atom, Starling Bank, Yolt and Tandem). Often these apps crisscross multiple categories of function or use scenarios. WeChat Pay, for example, includes practices of money-gifting through its 'red envelope' feature along with payments and other features. Through apps, money and related money-practices – of paying, transferring, gifting, budgeting, converting, investing, and so on – are increasingly encoded as software. While money has been 'digital' for a long time, it is the coding of money-practices and significant elements of the wider 'money ecologies' (Maurer 2015, 48) into software, where little or no distinction is made between money *per se*

and a specific money-practice, that is new. I refer to such a coding of money-practices as ‘appification’.

The appification of money has a number of significant ramifications. For example, it introduces any new number of actors, from the various app stores and phone platforms which come to mediate the ranking and visibility of apps, to new infrastructural actors (such as Amazon Web Services) and new (often third-party) actors in the business of monitoring and analysing app usage. The industries of banking, mobile service operation, technology and software provision (phones and other devices) are also re-aligning, while new regulation is emerging to encourage and guide innovation (such as the Payment Service Directive 2 in Europe and the related Open Banking regulation in the UK). However, appification also alters money’s relation to abstractness and embeddedness. Similar to anthropological and sociological theories of money as embedded or marked, the appification of money equally involves a distinguishing between different money practices. Not only is there a recognition of specificity (distinct embeddings, markings, meanings, etc.), but such a recognition is now the basis for product differentiation and innovation. The spectrum of money practices, situations, and wider money ecologies richly detailed by anthropologists and sociologists is being carved up into new product niches or features within existing apps. Such specificity is further extended through user personalisation, for example, by folding in profile data from different platforms, or by making use of device location awareness and notification features. In other words, appified money is equally interested in the here and now, the task at hand, the you, and how to intervene in these things: This app is for moving money across these borders; this app is for gifting to these people; this app is for buying in this store, at this price, and so on.

In what follows, I want to suggest that this new specificity, of money appification, follows an identifiable logic of production – with new forms of abstraction – and revolves

around a distinct value proposition that come together in the notion of experience. That is, money-related apps are produced through specific design techniques and framings *as experience*, and this notion of experience is also the criterion upon which apps are evaluated and the basis upon which new apps are brought into being. Money apps are made for experiences and judged on the basis of their capacity to deliver them well. Where does this notion of experience come from?

### *Experience as Economy, Experience as Design*

Experience has economic dimensions. The first exploration of experience as an economic entity was perhaps provided by Alvin Toffler in *Future Shock* (1970, 226). Toffler wrote of the rise of the ‘experiential industries’, which specialises in neither goods or services but experiences, experiences which in turn becomes central to the mediation of these other sources of value (goods and services):

Bankers and brokers, real estate and insurance companies will employ the most carefully chosen decor, music, closed circuit color television, engineered tastes and smells, along with the most advanced mixed-media equipment to heighten (or neutralize) the psychological charge that accompanies even the most routine transaction. No important service will be offered to the consumer before it has been analyzed by teams of behavioral engineers to improve its psychic loading. (Toffler 1970, 228)

Such a notion of experience is thus broad, applicable to any number of industries and commercial settings, and incorporates cognitive, affective, and environmental elements. It makes use of ‘mixed media’ and other carefully designed arrangements to intervene in everyday activities. In Toffler’s account, experience appears as a kind of extra layer on top of or in addition to a product or service, but he also imagines such experiences floating more freely: ‘The experience is, so to speak, the frosting on the cake. As we advance into the

future, however, more and more experiences will be sold strictly on their own merits, exactly as if they *were* things' (1970, 228).

Roughly 30 years after *Future Shock*, the notion of experience as an economic actor was fully developed in Joseph Pine and James Gilmore's influential book, *The Experience Economy* (1999). These authors similarly distinguish experiences from goods and (especially) services. 'Experiences', they write:

represent an existing but previously unarticulated *genre of economic output*. Decoupling experiences from services in accounting for what businesses create opens up possibilities for extraordinary economic expansion just as recognizing services as a distinct and legitimate offering led to a vibrant economic foundation in the face of a declining industrial base. (Pine and Gilmore 1999, x)

For these authors, experience is separated out as a new 'unit of value', which emerges through 'mass customization' and where 'every business is a *stage*, and therefore work is *theatre*' (1999, x; emphasis added). Mass customization is achieved through different forms of 'staging'. If readers detect a resonance with the sociological work of Erving Goffman, they are not mistaken. *The Experience Economy* reads like a business-strategy operationalisation of insights drawn from Goffman's seminal *Frame Analysis* – a book subtitled 'an Essay on the Organization of Experience' (Goffman 1986). Specifically, the practice of 'staging' experiences recalls Goffman's use of the theatre as his primary example to elucidate how everyday experience is 'framed'. The result of this experience economy approach is to reimagine employees and managers as actors and places of work as different types of theatre, where desirable outcomes can be achieved through the appropriate staging/framing.

By the time *The Experience Economy* was reissued in 2011, the authors could write of Apple as the new masters of experience: 'what store is now the envy of every mall owner and developer? Apple. Why? Customers clearly flock there not only for the goods but also the store experience...' (Pine and Gilmore 2011, x). A year after this reissue, Carmine Gallo

published her book-length account of Apple's rise in *The Apple Experience* (2012). Like Pine and Gilmore, Gallo relies heavily on theatrical metaphors, with discussions of scripts and stage settings, and heroes and villains. But Gallo also gives experience an expanded set of coordinates more in line with Toffler's early musings on 'psychic loading'. In a chapter dedicated to creating 'wow moments', for example, the staging of experiences comes to refer explicitly to a cognitive and emotional actor, with the task of experience *design* (considered below) to create 'emotionally charged events' (Gallo 2012, 143). Apple's famous Super Bowl ad '1984', directed by Ridley Scott, is reframed as the prototypical 'wow moment', where (in the ad) uniform rows of shaved-headed men sit, deeply absorbed by the ideological orations of a man on a giant screen, only to be interrupted by a colourful, sweaty, athletic woman, charging towards the screen with a sledgehammer. The woman launches the sledgehammer through the screen, literally exploding the ideological message. Whatever else there is to say about this ad, it certainly can be read as a kind of experience proposition, with all the narrative trappings of the period. As the voiceover proclaims at the end of the ad, once the new Macintosh is released 'you'll see why 1984 won't be like 1984'.

Such a 'wow moment' in this case, however, is limited to advertising, where the general staging of a brand experience only contingently extends to the eventual product. Alongside this growing consciousness of experience as a 'unit of value' emerged a number of *concrete methods* for designing experiences, including the aforementioned user journeys and experience maps. The origins of user journeys and experience mapping have been attributed to the work of Jan Carlzon and his 'moments of truth' (1987) and more generally to the rise of customer experience (or 'CX') management in the 80s and 90s, with the first actual mapping or 'blueprinting' of experience found in the article 'Engineering Customer Experiences' in *Marketing Magazine* by Lewis Carbone and Stephan Haeckal (1994; see Kalbach 2015). While there are many ways to create an experience map, most involve

breaking down a customer or user ‘journey’ into a chronologically or spatially ordered series of distinct moments. These moments are often visually depicted and are complimented with additional textual material or annotation that outline the elements of experience that are present in each moment. Aspects of this mapping resonate with earlier workflow or task analysis (pointed at consumers), but with experience replacing ergonomics or efficiency as the aim and orientation. For their part, Carbone and Haeckal’s approach involved a number of steps, including clarifying the experience to be delivered, studying pre-existing ‘real’ experiences with customers to determine positive or negative experience ‘clues’ (akin to signals), engineering an ‘experience blueprint’ based on positive clues and finally, implementing the blueprint. The blueprint, which includes a visual depiction of the experience titled the ‘staging area’ (recall Pine and Gilmore), divides the ‘total experience’ into a number of ‘layers’ corresponding to different ‘phases’ of this total experience (see Figure 2.). While Carbone and Haeckal approach experience as an additional component of a product or service – not too dissimilar to Toffler’s original ‘frosting on the cake’ – others have come to place a much higher importance on experience.

<<INSERT FIGURE TWO HERE>>

Figure 2. Visual component of Carbone and Haeckal’s ‘Experience Blueprint’ (1994, 16)

For example, Peter Merholz flipped this value hierarchy (where the experience is added-value) in a 2007 article titled ‘Experience IS the Product... and the only thing users care about’ (2007; see also Merholz et al. 2008). The piece offers a very brief re-reading of the history of the success of the Kodak Camera. In Merholz’s version, the success of Kodak did not derive from George Eastman’s invention of roll film, but in its ability to realise a specific vision, ‘You press the button, we do the rest’, which Merholz sources from a 100-



year-old ad. His point is that Kodak transformed the experience of photography, from something complex and technical, to something anyone could do. The vision of *experience as the product* underpins the approach of Merholz and the other co-founders of Adaptive Path, a pioneering and hugely influential experience strategy design firm.

Adaptive Path's own 'Guide to Experience Mapping' (2013) realises this vision of making experience the foundation, where customers may come across a number of different products and services as part of a larger 'customer journey'. This journey, in turn, is described as a 'model, an archetypal journey created from an aggregate of all customers going from point A to point B as they attempt to achieve a goal or satisfy a need' (Adaptive Path 2013, 4). The specific journey, and experience map more generally, are developed through a number of qualitative (web analytics, customer satisfaction data, surveys) and quantitative (interviewing, observing, 'sketchnoting') methods, but all are focused on three core building blocks, 'Doing, Thinking, and Feeling' (Adaptive Path 2013, 11). Much like the 'blueprint' considered above, the journey is broken into stages, but instead of 'clues', every stage of the journey involves doing (actions and behaviours), thinking (framing and evaluating the experience) and feeling (emotional 'highs' and 'lows') (see Figures 3. and 4.).

<<INSERT FIGURES THREE AND FOUR HERE>>

Figure 3. Example of Adaptive Path Experience Map.

Figure 4. Constituents of an Adaptive Path experience.

This approach to the customer or user is further elaborated in *Subject to Change* (Merholz et al. 2008) a collaboratively authored book by Adaptive Path's designers. In a chapter titled 'New Ways of Understanding People', the authors open with a declarative

principle: ‘We must understand people as they are rather than as market segments or demographics’ (Merholz et al. 2008, 35). Understanding people ‘as they are’ is achieved through developing a sense of ‘empathy’, a rather elusive notion which involves vicariously sharing an experience while maintaining a sense of objectivity. Empathetically understanding people is contrasted with three other approaches, drawn from marketing (where people are depicted as ‘sheep’), economics (where people are assumed to be rational) and human factors (where people are seen as ‘robot-like customers, interfaced to the system and relentlessly pursuing goals’ (2008, 49)). These other approaches are not entirely dismissed, but criticised for oversimplifying people ‘as they really are’ (2008, 50). What they omit, specifically, and what an emphatic approach tries to remain sensitive to is emotion, culture, and context. To summarise, the method of experience mapping as articulated through Adaptive Path involves analysing and designing customers journeys with a focus on actions (or doings), thoughts and feelings, and underpinned by an empathetic understanding of people (users or customers) achieved through remaining sensitive to emotions, culture and context. The point, of course, is not just to map existing experiences, but to create better ones, and to embed an experiential worldview into the organisation itself through the process of mapping.

While this experiential approach is applicable in any number of contexts, it has come to dominate in the digital realm of web and app development specifically in the form of user experience design (UX) and other closely related approaches. UX design is commonly described as belonging to a ‘third paradigm’ or ‘third face’ of Human Computer Interaction (HCI) (Harrison, Tatar, and Sengers 2007; Grudin 2005), in distinction to earlier human factors (ergonomics) and cognitive (information processing) ‘paradigms’. The rise of UX design has been attributed to the concomitant rise of personal and mobile computing, the internet, and the web, which lead to what Grudin describes as ‘discretionary use’ – use of computers beyond the specificities of office work (2005, 46). Harrison et. al. echo this in a

discussion of ‘non-task-oriented computing’, but also add the rising significance of ‘context’, ‘the social situation of interaction’ (or ‘situated actions’) and ‘emotion’ (2007, 5–6). For these authors, the third paradigm therefore focuses on ‘embodied interaction’, where ‘all action, interaction, and knowledge is seen as embodied in situated human actors’ (2007, 7). This general description of the changing nature of HCI, of course, mirrors the specific approach of Adaptive Path and their version of experience mapping.

Thus far, I’ve suggested that the notion of experience underpinning the application of money and money practices has both economic and design dimensions. Experience is understood as a distinct ‘unit of value’, separate from goods or services, and involving the reimagining of economic life (workplaces, retail stores, and so on) through the metaphors of theatre. As a design methodology, it involves placing customers or users in ‘journeys’, doing and thinking different things, with emotional ‘highs’ and ‘lows’. There is an attempt (in the literature at least) to ‘take a more holistic view of people’ (Merholz et al. 2008, 55); to actively bring in questions of culture, emotion, embodiment and the situatedness of people. Before returning to Apple Pay, I want to make one final observation: this notion of experience is *thoroughly informed by sociological and anthropological inquiry*. We have seen how Pine and Gilmore drew from Goffmanian ‘frame analysis’, for example, but the notions of embodiment and situated action that underpin UX design are equally indebted to the work of Paul Dourish (2004) Lucy Suchman (1985; 2006) and others. While UX is primarily a design practice, it is a practice formed through constitutive engagements with sociological and anthropological thought.

### *Apple Pay as Experience Money*

I believe we are now in a better position to understand the ‘how’ of the 2014 launch of Apple Pay, and what it means for Apple to focus on the user experience. Indeed, with even a

cursory overview of user journeys and experience mapping, the video clip Cook uses to introduce Apple Pay appears rather derivative and uninspired: it is a straightforward user journey. The first clip is the first journey (Figure 1.). It is staged and scripted into six moments. Cook has established that the bank card and the wallet are the villains, but the whole scene is unwelcoming. The fumbling around in the handbag, the Tic Tacs, the clip, the prying of the bank card out of the purse, the ID check, the failed card read and the storing away of the receipt and card – we have the makings of a bad experience.

The second journey is re-scripted, with Apple Pay as the ‘hero’. The new, shortened journey is smooth, uneventful. Somewhat paradoxically, it’s ‘wow moment’ is only registered through the confirmatory bleep of the successful payment. *‘That’s it!’* But in comparison to the contrived inconveniences of the first journey, the humble bleep may indeed ‘emotionally charge’ the user with a sense of ease and relief. At least, this is part of the ‘value proposition’, the rationale for choosing Apple’s experience over others. This experience value proposition is made more explicit on Apple’s developer pages, where the company offers testimonies from early adopters of the benefits of switching to Apple Pay. A product manager from Groupon comments, for example, ‘Apple Pay has facilitated greater real-time commerce, improved conversion and enhanced the overall Groupon mobile experience’ (Apple 2017). Apple’s own copywriters pad out the testimonies with further elaborations on experience: ‘the DoorDash team removed friction from the checkout experience for new users’; ‘With Apple Pay, there’s no need for payment method selection or data entry, resulting in an optimal customer experience’; and ‘With a better first time experience, customers come back more frequently’ (Apple 2017).

Since Apple Pay is an experience – *That’s it!* – it is free to cross different media and device specificities. It can be used to make a retail payment through a phone in a store, but it can also be integrated into other phone apps for specific in-app payments (such as train ticket

purchases). The phone interface can be substituted with an Apple Watch, eliminating the need of producing the phone at all. Apple Pay can also be used to make payments on the web with a MacBook. Depending on the model, this could be done with the Touch Bar (and fingerprint scanner) or with the aid of an iPhone or Apple Watch. As experience, Apple Pay is therefore medium agnostic.<sup>6</sup> *That's it!* can be materialised in a number of ways through multiple devices and device configurations.

Apple Pay is type of experience money, with a focus on creating *That's it!* digital payments. I am fully aware that this is a provocative usage of the already contested term 'money'. What is understood to be money has changed over time and differs between cultures and while there is a classic definition often rehearsed in economic textbooks – money as medium, measure, standard and store – this definition has long been challenged and extended (by the sociologists and anthropologists considered earlier, among others). As Bill Maurer summarises, 'Money is also a system of relationships, a chain of promises, and a record of people's transactions with one another' and, referring to the work of Keith Hart 'money is a "memory-bank"' (2015, 46). Maurer thus prefers to speak of 'complex money ecologies' to get at money's 'multiple and diverse use cases', 'its actual use cases – what you really do with it in whatever form you use it'; and to make explicit that money is 'infused with meanings, morals, and material traces of our relationships with others' (2015, 48). Whatever answer we give to the question What is money? Maurer adds, 'The answer is changing as electronic and mobile communications devices become a new interface for storing, spending, paying, and keeping track of money...' (2015, 37). What I am suggesting is that these multiple and diverse actual use cases are what is precisely being targeted through the notion of experience. Experience money is the deliberate attempt to design forms of

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<sup>6</sup> I borrow this term 'medium agnostic' from Tung-Hui Hu, who uses it in a slightly different sense to refer to the network infrastructures of the cloud (Hu 2015, xix)

money based on ‘actual use cases’ (Maurer 2015, 48) or, as the experience designers put it, for people ‘as they really are’ (Merholz et al. 2008, 50). Experience money is any attempt to break up the many ‘doings’, ‘thoughts’ and ‘feelings’ associated with diverse the use cases and practices of money and to deliberately infuse these with a coherent value proposition.

While experience money is not dependent on appification, it is through the process of appification that such a breaking up of money practices into consciously designed experiences is most readily observable.

To clarify, consider Figures 5. and 6. Both are obvious simplifications but help to illustrate the shift to experience money. Figure 5. shows a coin, tasked with the (impossible) burden of standing in for all modern money objects. Surrounding the coin are practices, which may include the full spectrum of things people do with money (whether economic, cultural, political or whatever). Money participates in all these practices and as it does its own identity changes. It is embedded in these practices; it shapes them and they shape it, and this takes place through use.

<<INSERT FIGURE FIVE HERE>>

Figure 5. Money and Practices.

With experience money, these money-practice dynamics are partly absorbed and acted upon. While the material objects of money were never stable (coins, notes, cards, etc.) through appification this materiality further proliferates and splinters. Much of the former materiality of money continues its retreat into digital infrastructure (as previously established with credit and debit cards). Apps and related software and hardware emerge to replace these other moneys as the visible mediators of everyday economic activity. The former relation between

money and its practices (Figure 5.) is more fully conflated, as the idealised practices of user journeys are inscribed into apps from the very beginning (Figure 6.). While these idealised practices can be more or less detailed, defined and codified, all experience money has them in some form – it is precisely what experience design acts upon. The conflation of money and practices through experience also results in a splintering, as numerous apps and related devices seek to compete for the new market of experience moneys with their own value propositions. Thus experience money reaches into the realm of money practices in a deliberate and indeed constitutional way on the one hand, but equally marks new lines of separation, of splintering, and possible incompatibilities on the other.

<<INSERT FIGURE SIX HERE>>

Figure 6. Experience Money.

By referring to the diversity of money practices mediated through appification and experience design as ‘experience money’, I hope to provoke a discussion in places where people usually talk about money, and almost never about design, user journeys, experience, and so on. The current popular discussion about what is happening to money, for example, revolves around the notion of *cashlessness*. Slowly but surely, we are becoming a ‘Cashless Society’! Regardless of whether we are becoming cashless or not, it is a future vision based on an absence. It is simply a future without cash. As such, critical responses to this tend to take the form of ‘some people rely on cash and they will suffer’, which is very true (Scott 2018). But we must also ask, what is *more*? If cash is on the gradual decline, what is on the up? The notion of experience money, named as such (as money), is better positioned to fill this void.

*Abstract embeddedness, Embedded abstractions*

Experience money is brought into being by taking a specific money practice – in the case of Apple Pay it is payment – modelling it as a user journey and then redesigning on the terms of experience to create a new value proposition. The precise methods for modelling and redesigning experiences vary, but it was noted earlier that Adaptive Path’s designers use both quantitative and qualitative methods including data analytics, surveys, customer satisfaction data, interviews, and observations. As mentioned, these are methods directly informed by social science research. The concepts that underpin them, such as ‘embodiment’, ‘situated action’ and their attention to ‘emotion’, ‘culture’ and ‘meaning’ align well with the sociological and anthropological approaches to money discussed above under the rubric of embeddedness. In this sense, the methods of experience are anti-abstraction; they are methods in the service of embeddedness; they participate in the critique of abstraction. They approach money as a series of rich experiences based on ‘how people really are’.<sup>7</sup> Money is a ‘doing’; a doing that people cognitively frame in different ways; a doing loaded with meanings and emotions. In other words, experience money internalises and operationalises sociological criticisms of money as abstract.

And yet, such inquiries into experience produce models, maps and journeys. Journeys are broken into moments or stages, with specific doings, thoughts and feelings attributed to each moment. The map is an abstraction, the journey is an abstraction. Embeddedness is the basis for new abstractions. In the case of Apple Pay, it is the store purchase, the purse, the handbag and swipe machine, the ID glance, even the bleep, that are the stuff of embeddedness. Apple Pay does not aim to erase this embeddedness, but rather to smooth it over, optimize it. The resulting Apple Pay journey is equally imagined as embedded in the store purchase scenario, with a full cast of characters playing their role. Such redesigned

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<sup>7</sup> Again, this is not to suggest the approach is successful.



experiences are carried along (abstracted) into specific products and services, into devices, interfaces and wider ecologies – into the full spectrum of everyday money apps. Experience design begins with embeddedness and turns these into new abstractions. It has been estimated that there are currently around 252 million users of Apple Pay, with quarterly transactions counted in the billions (Munster 2018; Wuerthele 2019). Apple Pay’s abstractions of embeddedness are re-embedded, distributed across different national contexts into any number of payment scenarios. In turn, this coming together of forms of embeddedness, of *embeddedness* and *abstract embeddedness*, of designed experiences and plain-old lived experience, is both the terrain of future design innovation and also where the flaws, impositions, modulations and occasional tyrannies of experience money become visible. While the designers of experience money seek to close the gap between designed and lived experienced, others might use to imagine other abstractions.

The emergence of experience money is significant for the study of money and everyday economies. The building-in of experience further problematizes neo-classical approaches to micro-economic life, since an emotional, encultured, meaningful actor is built into exchange transactions *a priori*. In other words, the *medium* of exchange is not rational. If the media of economic life are designed for experiences, it would seem to embolden the longstanding contributions of economic sociologists and anthropologists. Indeed, I have suggested there is at least a partial convergence with these ‘embedded’ sociological theories of money and new money artifacts. I have omitted a discussion of behavioural economics, but I believe the same holds (a partial convergence) for insights drawn from this field (especially since UX design and behavioural economists are both significantly indebted to cognitive psychology). Such a convergence, I suggest, significantly complicates any critique of abstraction based on embeddedness. In an economy of experience, of abstract embeddedness and embedded abstractions, the old moralising contrast between such terms

instead becomes an operating dynamic – indeed, a business model. It is the logic for how value is created. A good abstraction will translate into good experiences.

Throughout this article, I have refrained from overtly criticising theorists and practitioners of the experience economy, but a number of excellent critiques are to be found (Greenfield 2007; Sampson 2018, 2016; Lialina 2015). Instead, I have attempted to better understand what is happening to everyday economic activity as it is mediated through apps and experience design. I have tried to understand this design mediation and what it means for how we think about money. Without embracing the proposed world of experiences found in Apple Pay – *That's it!* – I want to suggest an experiential worldview entails a new way of seeing money. This way of seeing money is not native to economists, bankers, or policy makers but it is by no means a marginal perspective. It is not a subaltern vision. The worldview of experience permeates the major platform and technology providers, and these are some of the most powerful and valuable companies in operation. In terms of market value, Fortune 500 lists Apple, Amazon, Alphabet (Google), Microsoft and Facebook as the top five, in that order. In China, these are matched by the so-called Three Kingdoms of Tencent, Alibaba and Baidu. All of these companies are experimenting with what I have called experience money and as mentioned earlier, the different app stores are filled with different money-related apps. One can easily imagine a dark version of this development: further monetary privatisation; monetary lock-in; the worst kinds of 'personalisation'; any number of 'bad experiences'. But there are also opportunities to intervene. The field of experience design has been quite receptive to sociological and anthropological contributions. Rather than concerning ourselves with the ambivalences of money as abstraction, we might inquire as to which embedded experiences we wish to abstract and what kinds of abstraction we want to embed. What are the current limits to experience money and what might they become?

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