Bangor Business School Working Paper

BBSWP/16/03

The Future of Money: A Voyage Through Time and Space

By

Bernardo Bátiz-Lazo (Bangor, Wales) and
Leonidas Efthymiou (UNICAF, Intercollege Lanarca, Cyprus)

November 2016

Bangor Business School
Bangor University
Hen Goleg
College Road
Bangor
Gwynedd LL57 2DG
United Kingdom
Tel: +44 (0) 1248 382277
E-mail: b.batiz-lazo@bangor.ac.uk

The Future of Money: A Voyage Through Time and Space

Abstract

In this paper we look backwards and sideways to ascertain elements that are likely to determine the future of cash as well as cashless payment systems. Our analysis begins in medieval Europe while examining how legal tender and fiat money was imposed on people during the primitive accumulation era (Marx, [1887] 2015). Primitive accumulation marks the transition to a market economy. Paper money played a central role in the transformation of socio-economic relations as part of the imposition of wage labour upon self-producing, self-sufficient and self-provisioning populations. But primitive accumulation has been conceived as more than just a period of transition that led to the development of capitalistic socio-economic relations, to encompass a set of forces that permanently reproduce accumulation and capital's existence (Bonefeld, 2001; Dalla Costa & Dalla Costa, 1995; De Angelis, 2001; Perelman, 2001). Following this broader conception of primitive accumulation, we trace practices in Fordism and post-Fordism to explain how the emergence of a cashless/checkless economy results not only technological change and a drive for cost efficiency within financial institutions, but also results from economic restructuring, labour de-skilling and general changes in the social and cultural landscape. We content that market forces as well as government policy have contributed to the diffusion and adoption of cashless means of payment, within an intensifying automation and mobilisation of daily life where digital money is likely to outpace cash. Furthermore, the transparency (or lack of) with which these decisions have taken place, indicates the extent to which the government and business elites value the right to information and freedom of choice. The move to a cashless/checkless economy thus epitomises how money is also subject to the freedom versus security debate that is fast becoming one of the quintessential quandaries of the 21st century.

Introduction

A recurring question in today's society is whether and when the exchange of value will take place solely through the digital and cashless channels rather than through tangible forms of money.[1] Exchanging value is, of course, only one of the economic properties of money.[2] Growth in the use of digital media is perhaps self evident for most middle class adults in urban locations across the world and certainly for those in the UK, US, Scandinavia and other post-industrial economies. At the same time, however, cash remains popular as a means to solve low value retail transactions.[3] Commentators often argue that cash is more than simply a method to facilitate commerce as evidenced by social relations, habits and norms deeply rooted on physical representations of money (Bryan & Rafferty, 2016; Deville, 2013; Hollow, forthcoming 2016; Papadopoulos, 2015; Seltzer, 1994; Sørensen, 2016). Indeed, the heated debates that resulted in Harriet Tubman as the first woman on a US dollar bill and that which reinstated a woman character in sterling banknotes (i.e. Jane Austen), bear witness to the importance of cash beyond the purely economic.[4]

But is the continuing use of cash reason enough to reject the demise of physical money? Is there a strategy to protect cash from disappearing? Or is it the opposite, is there an institutional agenda that promotes the future replacement of cash with digital payments? What does a transition to cashless mean for the economy and society in general? Or as noted by Mayhew (2011), does society really grasps the implications of electronic money?

To evaluate the future of cash as well as cashless systems, we compare and contrast different historical developments. Specifically today's potential transformation into a cashless economy with the original evolution of money into currency. To do so, we return to medieval Europe to examine how legal tender was originally imposed on people. This enables us to explore the role and function of money in the historical transition to a market economy, that is, Marx's primitive accumulation period. The aim of this study, however, is not to evaluate in detail the specifics of primitive accumulation, nor is it to present a detailed review on the debates between classical and critical political economy. For more detailed accounts on the subject, we point you to E. M. Wood (2002) and Perelman (1991). In the same vein, the so-called state theory of money is best discussed in Bell (2001), Fullwiler, Bell, and Wray (2012) and Wray (1990, 2004). Our attempt here is to examine the future materiality of money. In doing so, primitive accumulation is important in helping rid ourselves from the impression that the fast and wide diffusion of cash in the early capitalist era was free of conflict, voluntary and a natural consequence of human social relations. Instead we propose to analyse the scope and process of diffusion of cash as a tactical, intentional and technical element of primitive accumulation. This line of thought, then, begs

[1] Following del Angel (2016) we use cashless payments to encompass payment cards, electronic funds transfers, mobile banking and other ways to solve on the spot payments which nowadays are associated with digital technology. However, cashless payments can take many forms, for instance payments with vouchers, checks (also discussed in this paper) and local monies. For the sake of clarity, we use the term cash to describe coins and banknotes issued by a central bank and functioning as legal tender.

[2] The other properties are being a numeraire, a store of value, and a source of liquidity. It is also desirable that it is easy to transport and identify as well as durable, easy divisible, hard to counterfeit and easy to store. It is also worth remembering that currency and money can be different because while money stores intrinsic value within itself, fiat currency possesses buying power bestowed upon it by the government. See further the pyramid of money in Bell (2001).

[3] See sources cited here https://theconversation.com/around-the-world-in-80-payments-global-moves-to-a-cashless-economy-52882 (accessed 10-May-2016).

[4] https://www.washingtonpost.com/news/wonk/wp/2016/04/20/u-s-to-keep-hamilton-on-front-of-10-bill-put-portrait-of-harriet-tubman-on-20-bill/ (accessed 11-May-2016) and http://www.theguardian.com/lifeandstyle/2015/apr/11/how-social-media-helped-jane-austen-banknotes-caroline-criado-perez (accessed 11-May-2016). The first woman character on a UK pound note other than the monarch, was Florence Nightingale in the £10 withdrawn in 1994.

the question: will cashless payments be imposed on people in the same deterministic manner and scope than banknotes and coins were imposed upon previous societies?

In an attempt to answer this question, the remainder of this article structures as follow. The next section reviews the strategic role of cash in imposing wage labour upon societies in the primitive accumulation era. Then, we examine the extension of primitive accumulation in Fordism and the transformation of socio-economic relations. In the third part, we discuss the emergence of the cashless/ checkless systems in the Post-Fordism era. This analysis also presents the efforts of governments and payment institutions to impose the use of non-cash transactions upon society. In the final part, we introduce the so-called time-space-compression to explain how automation and mobility provide cashless payments with a competitive advantage, which is likely to outpace cash in the long-term… but by then we will all be dead.

Cash and the Transformation of Socio-economic Relations

In part 8 of Capital Volume 1, Marx coins the term "primitive accumulation" (also known as original accumulation) to explain both the time period and process through which feudalism transformed into a capitalists system of production, while also laying the foundations of the capitalist social relations in a pre-determined and systematic manner.[5] It's "an accumulation which is not the result of the capitalist mode of production but its point of departure" said Marx ([1887] 2015, p. 873). At the heart of this process is the conversion of self-producing, self-sufficient and self-provisioning people into wage labourers. In other words, primitive accumulation marks the historical process of separating free workers from the means of providing for themselves. Through this process, workers were forced to sell their labour to survive and subsist (Perelman, 1991, p. 13). Important in this transition was the determination of human purposeful activity in working for and forced to accept cash, while surviving through the use and exchange of cash. But as is also well known, the payment for this labour had to be less than the monies received in exchange for final products so that capital accumulation could take place (and therefore, class distinctions between possessors and non-possessors came to be). In this context, social relations were reduced to money received first as wages and later on as salaries. Self-sufficiency, barter, sharing and the "gift" economy were all targeted and side-lined during the primitive accumulation era because production intended for self-subsistence could help people avoid the monetary nexus (and its materialisation in the form of cash). Once capitalism is in place, labourers could no longer escape income tax or market relations. Although many were reluctant to abandon self-production and enter wage labour (in Europe as well as everywhere else), it was important for the success of the capitalist system to drive the working population to the point where exchanging value through cash was an absolute necessity. Indeed, according to the *Oxford English Dictionary*, the use of cash as a sum of money or form of coin roughly dates to 1596, that is, towards the end of the primitive accumulation period and the start of the Industrial Revolution.

At this point it is important to remember that markets and money preceded the period of primitive accumulation, capitalism and market societies. There is a consensus amongst anthropologist that there is no record of a barter economy pre-dating the emergence of money as barter requires a well-defined system of weights and measures. Çatalhöyük in what is now Turkey is one of the first known towns where houses and

[5] See also the reformulation by Beckert (2014).

human remains dating from its foundation some 9000 years ago are all very similar, suggesting equality.[6] Change came a few thousand years later. The trigger seems to have been an agricultural revolution in which new methods of cultivation and animal domestication increased food production and allowed some individuals to build up wealth.[7] The surplus food freed some from toiling in the fields to focus on specialized tasks such as carpentry or pottery. This marked a change from social sharing to hierarchies. Throughout the Middle East and China between 6000 and 4000 BC, as towns became bigger, a powerful elite commandeered not only resources, but labour. In this context there is, however, much less consensus as to how and why money emerged. Nonetheless, money was present in India, China and the Greek states more or less at the same time (Graeber, 2011). Yet the demise of the Roman Empire brought about a period of dematerialisation of money, which roughly lasted until the start of the Industrial Revolution. Medieval Europe, therefore, observed long periods where no new coins were minted and payment was made as a combination of different moneys or monies and goods (Gelderblom & Jonker, 2016). The French historian Marc Bloch, who has examined the social relations of the feudal era in Europe, suggested that although money was based on a commodity, the use of money had never ceased to be a standard method of exchange. The difference, however, is that today's cash clearly displays its value (in terms of monetary units) where as medieval coins only the figure head of the sovereign – who in turn set the rate of exchange between coins minted in different places. Thus even when money was not actually used within an exchange, it was a numeraire or a point of reference for the value of the products (Bloch, 1967; Gelderblom & Jonker, 2016). But what we want to emphasize in this article, is the importance of cash as a central medium to impose wage labour upon societies in the primitive accumulation era and the transition from feudalism to capitalism.

Similarly, markets were a central element of societies, far before the primitive accumulation era. However, as suggested by Karl Polanyi ([1944] 1957) in *The Great Transformation*, there is a difference between societies with a market, such as have existed throughout recorded history, and a "market society". As E. M. Wood (2002, p. 21) further elaborates on Polanyi, in all earlier societies, economic relations and practices were embedded or submerged in non-economic relationships and they remained a subordinate feature of economic life.

More specifically, Polanyi refers to "redistribution and reciprocity", or a combination of these two systems, to contend that prior to primitive accumulation, societies witnessed economies organised around non-economic relationships. Kinship, communal, religious and political motives were often central components of organizing economic life. More often so, than through the mechanisms of market exchange. For instance, Polanyi explains how some traditional societies, like Melanesia (among others), managed land and labour under social laws of kinship. The empires of Hammurabi in Babylonia and the New Kingdom of Egypt, both centralised despotisms of a bureaucratic type, depended on redistribution of land (Polanyi, 1957: 312). On the whole, where markets did exist in pre-market societies, even when they were important, complex and extensive, they remained a subordinate feature of economic life.

Primitive accumulation and the "transition" to capitalist social relations, took place in a long and dilated historical processes in Europe as well as in satellite colonies, although not always at the same time and speed (Marx, [1887] 2015, p. 873). The measures and laws imposed to introduce a capitalist system were brutal, as

[6] https://www.newscientist.com/article/dn24841-stone-age-mural-ups-the-stakes-in-quest-for-oldest-map (accessed 1-Jul-2016).
[7] https://www.newscientist.com/article/2094658-the-worlds-oldest-paycheck-was-cashed-in-beer/ (accessed 1-Jul-2016).

people often did not enthusiastically engage in wage labour. Perelman (2000) describes the process of primitive accumulation like a pair of scissors. The first blade served to undermine the ability of people to self-produce and provide for themselves. The other blade was a system of severe measures and laws required to keep people from finding alternative survival strategies outside the system of wage labour. For instance, other than the dispossession of land from the commons, Perelman explains how England enacted a series of stern measures to prevent people from drifting into vagrancy or falling back onto welfare systems.

*"*According to a 1572 statute, beggars over the age of fourteen were to be severely flogged and branded with a red-hot iron on the left ear unless someone was willing to take them into service for two years. Repeat offenders over eighteen were to be executed unless someone would take them into service. Third, offenses automatically resulted in execution" (Marx 1977: 896, cited in Perelman, 2000, p. 14).

Similar statutes appeared almost simultaneously during the early 16th century in England, the Low Countries, and the canton of Zürich in modern day Switzerland (LeRoy Ladurie, 1974, p. 137). Around this time, English Game Laws prohibited all from hunting except the aristocracy – which represented less than one percent of the population (Broderick 1881, 386–89, cited in Perelman, 2000, p. 14). But anybody who could accumulate sufficient resources could, in principle, purchase the right to hunt. Eventually, the majority of labourers, lacking any alternative, had little choice but to work for wages and live close to subsistence level. At the same time, public spaces were constructed in London, such as grand hotels, and these were open to wealthy men and women, to see and to be seen (Urry, 1995).

Force and brutality, nonetheless, were not always linked to physical coercion and violent seizure of peoples' means of production. To use the words of Foucault (1977 p. 11) on the abolition of Branding in England and France:

"[t]he body now serves as an instrument or intermediary: if one intervenes upon it to imprison it, or to make it work, it is in order to deprive the individual of a liberty that is regarded both as a right and as property. The body, according to this penalty, is caught up in a system of constraints and privations, obligations and prohibitions. From being an art of unbearable sensations punishment has become an economy of suspended rights."

In the same spirit, a variety of methods were employed by the colonial powers to force people to become wage-labourers. For example, Forstater (2005) explains that other than land expropriation and forced labour, another important means of forcing the indigenous population to work as wage-labourers in European colonies was taxation; and the requirement that taxes be paid in cash – preferably in colonial currency. In Russia, Europe, and Asia the taxes ought to be raised to force the populace to work harder (Vries, 2002, p. 95). Gradually, all government taxes had been transformed into cash payments, including in India and China. "In the Ottoman Empire monetization made the least progress, but with the increasing weight of cizye, avariz, and tax farming, here too cash payments were on the rise" says Vries (2002, p. 98).

Cyprus offers a specific example of how colonialism forced people to move from self-subsistence to wage labourers. The British took over Cyprus from the Turks in 1877. Without delay, the British worked towards replacing the feudal system with wage labour through a mass of rapid changes. To support the newly developed mining industry, they created roads, harbours and factories. Shipyards and ore furnaces cleared the trees, rivers became canalized into dumps, leaving numerous peasants unable to irrigate their land and maintain self-production (Pancyprian Federation of Labour, 2002). Copper-pyrites, iron-pyrites, gold and other ores used to be extracted and directly exported to the colonial metropolis - Great Britain. The process of primitive accumulation in Cyprus caused the gradual drift of population to cities and around mining areas. The first wage labour originated in the poor self-producing farming class. These deprived peasants left their villages and moved to the towns or the mines to work for meagre wages. They used to live in squalid, miserable conditions and sleep in wooden huts, caves, and hovels. They were also plagued by various illnesses such as tuberculosis and typhus. The rural population was driven to extinction while thousands of Cypriot villages laid to waste. The only bond between colonists and labourers was “cash”. In colonies like Cyprus, the “mode of production was *clearly determined by the colonizing power*, and was in no way a ‘natural’ outgrowth of the development of the indigenous communities” (Thomas, 1984, p. 10).

In Africa, when the French colonists identified that indigenous people will not subscribe to wage labour voluntarily, they introduced harsh taxation which had to be settled in the colonial currency (Coquery-Vidrovitch, 1969; Fieldhouse, 1971; Forstater, 2005). Additional measures included the introduction of cash crops, “pressure for ‘volunteers,’ land policy squeezing Africans into ‘reserves’ destroying the subsistence economy, and ‘contracts’ with penal sanctions” (Fieldhouse, 1971, pp. 620-621).

These examples are just a few among many, revealing the process of primitive accumulation that brought changes in social and property relations, as well as the accumulation of wealth that permitted the creation of capital-labour and emergence of industrial capitalism. However, as we explain below, primitive accumulation is not a single period. On the contrary, the following analysis traces the extension of primitive accumulation in the capitalist era.

The Changing Balance of Consumption and Accumulation in the 20th Century

To examine today’s alleged transition to a cashless economy, we have to understand the early foundations upon which this evolution was built. Following this requirement, this part of the analysis takes our historic review a step further. It explains a critical turn characterised by radical changes in principles of social, technological, political and economic life, including changes in labour processes, consumer habits and state powers. To explain the changing balance of consumption and accumulation in the 1900s, we refer below to Fordism, Taylorism and then Keynianism.

The extension of primitive accumulation practices in the capitalist era can be found in Henry Ford’s five-dollar, eight-hour shift, automated car assembly line in the early 20th century. In The Condition of Postmodernity, Harvey (1991) explains how Ford’s organizational and technological innovations were routed in well-established trends: “Ford likewise did little more than rationalize old technologies and a pre-existing detail division of labour, though by following the work to a stationary worker he achieved dramatic change in productivity”. Similarly, F.W. Taylor’s thinking in *The Principles of Scientific Management* (1911) was, according to Harvey, influenced by mid-19th-century writers like Charles Babbage, that Karl Marx also found enlightening.

In other words, the separation of management, conception, control and execution, as well as the social relations and de-skilling characterising the shift in labour control practices, were already well under way in many industries. However, the difference between Ford and Taylor (as well as Fordism and Taylorism), was Ford's explicit vision and recognition that mass production meant mass consumption. Mass output and the highly productive assembly line were dependent on a considerable body of customers being able to absorb the final products. For Ford, this could be achieved through providing workers with sufficient income, adequate leisure time to consume the mass produced products, powerful corporations to regulate the economy, national prosperity, a populist democratic society and renewed social relations. Hence the importance of Henry Ford's five-dollar, eight-hour shift, automated car assembly line.

The critique of the US credit card market by Ritzer (1995) is also indicative of the changing social landscape that stretched for nearly half a century. He explains how the opening of the first McDonald's, the first shopping mall, the first Holiday Inn and other hotel chains, the opening of the Disneyland, the national television broadcasting, the massive expansion in the use of automobiles, a dramatic growth in the road and motorway system, the first jet airplanes, the travel booming and other developments in the1940s and 1950s, played a role in the transition to a more affluent and mobile society.

This bundle of developments in organisation and culture, are also attributed to technological developments. Especially technologies and industries that had been pushed to extreme rationalization during the inter-war period and became major players in the post-war economic boom (Harvey, 1991). Interestingly, today's adoption of digital systems, relies heavily on particular applications of computer technology as well as "rails", "pipelines" and other pre-existing infrastructure (Maurer, 2012, 2015).

By the 1950s, Fordism reached maturity and became firmly connected with Keynesianism through internationalization and world-wide expansion. From the US mid-west, to the British west-Midlands, to the River Plate in South America or the Kwanto plain in Japan, together with the state-sponsored reconstruction of war-torn economies, a phenomenal growth was pushing for a world dominated by mass production and towards greater homogeneity in tastes and behaviour. As we explain below, this phenomenal turn, offered cashless payments a fertile ground for expansion. This processes rooted in legislation that forced workers to accept wage payments directly to their bank account though electronic means as early as the 1950s. More recently, this process has seen cashless payments as part of the narrative into financial inclusion (distributing benefits) and poverty alleviation (Rouse & Verhoef, forthcoming 2016).

The Cashless/Checkless Dynamic

The *Oxford English Dictionary* records the first use of 'cashless' in 1833 as a synonym of 'poor' and 1937 as the earliest use of the term to denote a financial transaction that did not involve the physical exchange of coin or paper money. The latter took place in the context of the postal giro transfers, which became popular in Germany, Austria and other European countries in the early 20th century.[8] The idea of a cashless payment evolved again in the mid 1950s, alongside and as a consequence of the early adoption of computer technology

[8] Giro transfers involve direct account to account payment as instigated by the payer and not the payee. See for instance Billings and Booth (2011) and https://en.wikipedia.org/wiki/Giro (accessed 15-Jun-2016).

by retail banks (Bátiz-Lazo, Haigh, & Stearns, 2014). This modern concept of cashless payment encompassed the idea of using applications of computer technology to remove paper (including banknotes) from bank processes as this would lead into an utopian (and not well define) future of trade and financial services running across computer networks (Bátiz-Lazo & Effthymiou, forthcoming 2016). But the emergence of this vision took place in parallel with many others in the wider human, political, monetary, societal and technological changes of the post-war era. Of particular relevance were ideas of modernity that dominated many countries in the 1970s and 1960s and told how to reshape not only individual living spaces and dress codes, but also cities with huge concrete residential blocks and reshaped the urban and rural landscape with highways, spaghetti junctions and grand boulevards for the motor car. Engineers and bankers were sent in flocks to the USA to learn from environments which these revolutionary ideas were playing out, returning with 'tabula rasa' development plans to realise their own modernity dreams (Carhcart-Keays, 2016).

While people could travel longer, faster and further, payment cards also emerged as a convenient, even necessary, companion (Bátiz-Lazo & del Angel, 2016), which further reinforced the emerging idea of financial world without paper thanks to the possibilities of a sleek, efficient, and safe electronic messages replacing cumbersome, costly, and easily-forged paper cheques, banknotes and coins. Some of the early visionaries argued that once the major banks digitized their accounts, records, processes and procedures; they would be able to connect their computers over a telecommunications network and process most routine payments entirely in electronic form (Bátiz-Lazo *et al.*, 2014). A few of them even predicted that paper notes and coins would eventually be replaced by a nationwide electronic funds transfer system (EFTS), activated by some kind of economic identification card, ushering in a completely "cashless-checkless society."

At the root of the ideas of a cashless/checkless future were not only technological developments and utopian dreams, but also the hard reality of making the need to consider electronic replacements to paper cheques inevitable by the 1960s.[9] From 1955 to 1965, the volume of checks processed by the Federal Reserve rose from 14 billion a year to nearly 22 billion, that is, about 60 million each day. The projected growth rate for the following decade was even higher (Lee, 1967).[10] Even with the introduction of innovative means, such as the magnetic ink character recognition (MICR) and high-speed check sorters, the Federal Reserve (the US central bank and responsible for nationwide cheque clearing) was already finding it difficult to keep up with the explosive volume. The process of clearly an increasing volume (but lower average value) of paper cheques incurred in increasingly significant monetary costs. At this time, administrative processing included all paper checks written in the United States being physically sorted, routed, and delivered to the issuing branch before the check was settled and final payment made.[11] This process incurred not only significant handling and transportation costs (estimated at $3.5 billion per year), but also "float" costs for the depositing institution until

---

[9] Yet it was until 2011 when the start of the end of paper checks really took place (see http://www.businessinsider.com/the-death-of-the-paper-check-2013-3?IR=T - accessed 12-May-2016) and 2018 in the UK, while EU wide plans have repeatedly come derailed (see http://www.wsj.com/articles/SB107100286137843900 - accessed 12-May-2016).

[10] Another contemporary study estimated a similar trend but of different magnitude as it stated that approximately one and a half billion checks were cleared in the USA in 1939, and this volume increased to 6.5 billion in in 1950 and to 13 billion in 1960 (Yavitz, 1967). The estimates by Lee (1967) and Yavitz (1967) concur in identifying a spectacular rise in check volume and activity, with no corresponding increase in the value of deposits, thus placing a severe strain on the US banking system.

[11] This remained true until the passage of the "Check Clearing For The 21st Century Act - Check 21' in 2004.

settlement was received.[12] Handling costs are per-check, but float costs are per-dollar, so any further increases in volume, or delays in clearing, would result in significant cost increases.[13]

This need of increased efficiency and cost reduction generates some interesting thoughts in terms of the scope of cashless/checkless diffusion and how it parallels with the determinism observed in primitive accumulation. There is something common between the scope to impose cash during the historical process of primitive accumulation and the replacement of paper money in the second half of the 20th century. For instance, Bátiz-Lazo *et al.* (2014) explain that the main philosophy energizing the cashless/checkless promise was always associated with the elimination of checks even though these were the best established alternative to banknotes and coins in the 1960s and 1970s. This was also the case in trade press reports whereas central bankers were more concerned with eliminating checks. The point was to remove the circulating paper from the system, whether that paper (it was issued by a person or bank).

Institutions and Strategizing

The effort by institutions and start-ups involved in cashless payments to expand their customer base and use of non-cash solutions among society has been continuous. For instance, Ritzer (1995) explains the tireless effort by credit card firms to attract high school and college students to obtaining credit cards and using them frequently. Other strategies aimed at reaching new groups of consumers by "piggy backing" penetration. In other instances, firms were approaching customers through well-known charities. This is a popular practice among card firms where one cent of every mobile or card transaction is donated to a cause. For example, in 1984, American Express collected $1.7 million for the restoration of the Statue of Liberty. One cent was donated for every transaction and one dollar for each new card produced. During this course, American Express increased its card usage by 28% and new card applications rose by 45% (1995:43).

Other marketing strategies are even more enticing. It seems that the logic of growth, consumerism and increased consumption has been and still is part of the cashless agenda. For instance, gambling apps in mobile phones enable a whole casino at the user's fingertips, including changing bets as a particular sports game takes place. Payday lenders such as Wonga actively encourage very short-term debt through TV advertising and speedy acceptance through its websites while repayment rates are close to modern day usury and "loan sharking".[14] A Facebook notification by a bank congratulates a customer for winning a trip to Rio for the 2016 Olympic Games after using her VISA branded plastic card. Just another VISA promotion among many that enable banks and credit card companies to expand their business while at the same time, they extend the use of cashless payments in every aspect of life and micro purchasing, varying from a pencil in a book shop to parking facilities or a Starbucks' espresso. In this sense, cashless payments were not only developed and have grown

[12] While the check passed through the clearing system, which could take several days, the depositing institution had to pay interest on the deposited funds and often make some portion of those funds available to the depositor, even though the depositing bank would not receive payment from the check-issuer until the clearing process was complete.

[13] These costs were also more pronounced in the United States than in other countries due to the sheer number of banks. In 1966, there were 14,000 banks in the nation, so the likelihood that a check needed to go through the national clearing system was higher than in countries with fewer banks per capita. At the same time the use of personal cheques was much higher in the USA than other countries. In Spain, for instance, their penetration as a means of payment remained negligible even after the introduction of check guarantee cards in 1971.

[14] https://theconversation.com/uk/topics/wonga (accessed 31-May-2016).

hand in hand with the shift in the way we experience space and time, but they have also played a major role in promoting the automation of daily life and transforming the way we borrow and spend.

The road to a cashless economy has not been uneventful as there are many more failures than successes. Ahead of their time, early cashless technologies failed to perform, adding obstacles to implementing visions of the future or causing uncertainty around the technologies that followed. One recent great failure was the first electronic purse, which aimed to use chip technology and plastic cards to improve off line payments. These were Mondex (launched in 1991) and VisaCash (launched in 1996). As explained by Bátiz-Lazo and Moretta (forthcoming 2016), the outlook of the early electronic purse was very promising as they were technologically advanced and had the support of local banks and large international players buying into the concept. However, both systems failed to develop widespread customer acceptance and therefore, enough business volume to become viable. Reasons leading to failure included a lack of a clear business proposition to merchants or customers to abandon banknotes and coins for small value payments. Other technological innovations could not be implemented due to a lack of appropriate legislation, while on other occasions, a lack of a clearly defined regulatory framework had the opposite effect. In other instances, the banks themselves rejected the adoption of cashless solutions for considering them too risky or a poor business case. Overall, the cases of Mondex, VisaCash, as well as a long list of other e-cash and electronic purse schemes have demonstrated that convincing people to adopt high-tech alternatives to cash is extremely hard, it is lengthy and can be very expensive.

Government Policy

The cost efficiency of cashless payments has not gone unnoticed by governments. A number of initiatives have been implemented while looking to reduce the cost of distributing benefits and also, promote financial inclusion. For instance, under the Omnibus Consolidated Rescissions and Appropriations Act of 1996, the US congress mandated that all federal payments were to be made by Electronic Funds Transfer (EFT). Part of this welfare reform was the Electronic Benefit Transfers (EBT) application. This system enabled a single plastic card access to state benefits, such as welfare payments, through Automated Teller Machines (ATMs) and Point-of-Sale Systems (POSs). At the same time, the savings for the government were substantial in terms of reduce workload. For instance, Humphrey (1996) estimated the annual benefits from Electronic Benefit Transfers in the United States was $195 million per year in 1996. In another study, Pulliam (1998) estimated that the cost to the US government of distributing welfare payments through EFT was only 6 cents per transfer as opposed to 36 cents per paper cheque. This study estimated total savings could amount to almost $1 billion over five years. To little surprise, the distribution of welfare through cashless means became mandatory – regardless of the situation of the recipient. Moreover, other nations have used this type of experiences (specially in top industrialised nations members of the G8) in support, justification and encouragement to abandon cash. For instance, a similar story to that of the US was told by C. Wood and Salter (2013) for the UK, where local councils used pre-paid cards to distribute welfare payments, resulting in substantial savings as well as placing them ahead of other local councils in the preparation for the introduction of a single "universal benefit" card.

The success of M-Pesa in Kenya encouraged embracing cashless payments to facilitate access of households to the formal banking sector and thereby providing greater financial inclusion. For instance, del Angel (2016, forthcoming 2016) explains how the Mexican authorities have been using debit and pre-paid cards while aiming to reduce the country's informal economy and, at the same time, promoting financial inclusion. Mexico, the world's 15th largest economy, has a sophisticated financial system and a well-developed telecommunications infrastructure. At the same time, the country has a low level of financial inclusion, a large informal economy and a widespread use of cash. According to Del Angel, the strategy of the federal government has been to limit the growth of informal economy, which is estimated at around 28% of GDP for the period 2005 to 2013, and promote financial inclusion.

In another work, Espinosa Cristia and Alarcón Molina (forthcoming 2016), explain how a Chilean correspondent banking network based in corner shops, called CajaVecina, was born as part of a larger strategy promoting financial inclusion, increased communication, socialisation and universalisation of money, while leading to increased participation and social support. CajaVecina launched with the support of the government own bank, BancoEstado, in 2006 with 216 correspondents in its network. By 2016 the network had grown to 27,000 correspondents while carrying out services such as cash withdrawals, cash deposits, transfers (among BancoEstado's accounts), balance inquiries, payments of credits and dividends, services payments, cash advances and payments of BancoEstado credit card, and topping up mobile phones, among others.

Another notable example of financial inclusion through cashless means comes from Uruguay. More specifically, a study Sanroman and Santos (forthcoming 2016) revealed that employees who receive their wage through a bank account deposit are more likely to become financially included. In this line, an identical measure is included in a Law for promoting financial inclusion, currently under discussion in the Uruguayan parliament. Among others, the new legal framework would allow for tax rebates for those who pay with credit or debit cards and would enforce other people apart from employees to receive earnings through financial institutions.

However, some governmental initiatives often take a more direct attempt to impose cashless means of payments upon societies while others are driven by societies themselves. For example, to limit tax evasion, the Greek government has recently imposed a system where taxpayers have to spend up to a certain amount of their incomes via bank and card transactions in order to qualify for an annual tax-free exemption[15] [16]. In other words, producers and sellers are dependent on cashless systems for access to trade and are subject to imperatives.

On the other hand, the examples of Denmark and Sweden show that cashless economy is often society-and-business-led. Therefore, it is suggested that the development of a digital economy is one that takes full advantage of digital technologies to enter the social sphere, the public and private, the work and life (if such a distinction still exists) through an all-inclusive composition of government policies; business integration initiatives; and societies that are characterized by a friendlier, or even loving, disposition for electronic-payments.

[15] Durden, T., 2016. Greek Attempt to Force Use Electronic Money Instead of Physical Cash Fails. Zero Hedge, Available from: http://www.zerohedge.com/news/2016-02-21/greek-attempt-force-use-electronic-money-instead-physical-cash-fails [Accessed 21February 2016].

[16] Tzortzi, E., 2016. Gov't Plan for Forced Use of Cards Runs into the Market's Failure to Adapt, Available from: http://www.ekathimerini.com/206182/article/ekathimerini/business/govt-plan-for-forced-use-of-cards-runs-into-the-markets-failure-to-adapt [Accessed 19 February 2016].

In Sweden, bills and coins make up just 2 percent of the economy while many banks no longer handle cash. Meanwhile, 95 percent of all retail sales are cashless and most public buses won't even accept cash.[17] Formal reports show that Sweden is performing well above the EU average with regard to the provision of eGovernment services, with citizens, enterprises and public administration enjoying the benefits in terms of convenience, efficiency, increasing transparency and reduced spending in public administration. In neighboring Denmark, retailing is not legally bounded to accept cash while government officials have set a 2030 deadline to completely make paper money redundant. Danish prefer to use cashless means as they rank 1st amongst the 28 EU Member States with 88% of all Internet users engaging in eBanking and 82% in online transactions.[18] (European Commission, 2016).

Another interesting example is that of Australia where the decline of cash and cheques is indicative of the country's unstoppable march towards a cashless future. Cheques are almost obsolete while cash is declining in popularity at unprecedented rates. Once again, this is a society-led transformation as consumers and businesses choose the payment methods that are best for them.[19]

To sum up, although we don't analyse each and every country's growth in terms of payment innovation, we did present a number of examples that follow the non-cash path. As a more general point, it's suffice to say that the 'World Payments Report', year after year, records an overwhelming growth in non-cash transactions in both mature and emerging markets around the globe.[20] At the same time, and at the time of writing this article, the circulation of cash in many economies is also rising. This reality, takes us back to some the questions we raised in the introduction. *Is the continuing use of cash reason enough to reject the demise of physical money? Is there a strategy to protect cash from disappearing? Or is it the opposite, is there an institutional agenda that promotes the future replacement of cash with digital payments?*

Although most of these questions cannot be answered in a straightforward manner, we suggest that the social meaning of primitive accumulation is a continuous phenomenon within the capitalist mode of production through ideals of individual freedom. States and corporations emphasize the liberty of consumer choice, 'not only with respect to particular products but also with respect to lifestyles, modes of expression, and a wide range of cultural practices' (Harvey, 2005). In this sense, primitive accumulation is not a onetime, one-place phenomenon leading to capitalism. On the contrary, as we explain in the following sections, it's a continuous and inherent element of modern societies that extends though governmental policy, private initiative and libertarianism to the western world, while exploitative practices take advantage of poor working populations in other parts of the world. This is why we use the words of Massimo De Angelis (2001) to suggest that primitive accumulation is an "inherent-continuous primitive accumulation". It's not static and not geographically bounded. Following this line of thought, we find important to discuss in more depth the socio-economic

---

[17] Winsor, M., 2015. Sweden Shifts Toward A Cashless Economy Despite Rising Risks Of Electronic Fraud (online). International Business Times. Available from: http://www.ibtimes.com/sweden-shifts-toward-cashless-economy-despite-rising-risks-electronic-fraud-2240224 [Accessed 22 May 2016].

[18] European Commission,. (2016). Digital Single Market: Digital Economy and Society, Sweeden, Denmark (online). Available from: https://ec.europa.eu/digital-single-market/en/scoreboard/sweden [Accessed 22 May 2016].

[19] Hawke, A., 2016. No small change: moving to a cashless society is the next step for the Australian dollar (online). The Sydney Morning Herald. Available from: http://www.smh.com.au/comment/no-small-change--moving-to-a-cashless-society-is-the-next-step-for-the-australian-dollar-20160215-gmv11x.html [Accessed 20 May 2016].

[20] World Payments Report, 2015, Capgemini and Royal Bank of Scotland. Available from: https://www.worldpaymentsreport.com/download [Accessed 20 May 2016].

framework supporting today's monetary landscape. This is attempted through a discussion on automation, mobility and movement in the following section.

Automation and Mobility

As we explain below, if the future of money and the world itself is likely to be cashless, this is powered and reinforced by the automation, mobility and movement of our daily life. This trend can be better understood trough the so-called "time-space compression" (Harvey, 1989), a phenomenon where the world becomes smaller (compressed) due to technological innovations in transportation and communication. Interestingly, at the point where David Harvey was articulating the notion of 'time-space compression', much of today's widespread inventions, such as the Internet, smartphones, e-commerce, mobile/ contactless payments, emails, digital currencies and others were non-existent.

Since David Harvey introduced the idea of "time-space compression", many other scholars have considered, with both approving or disapproving support, whether the world is indeed "speeding up". However, the world is not just "speeding up" but also "spreading out". At the very same time as space and time collapses and shortens due to automation, the world also gets *larger* due to high levels of mobility for jobs, education, investment opportunities, holidays, and migration. This paradox, also called as "Time-Space Distanciation" by Giddens (1990), who also explains how continuous movement and remote interaction have become a central feature of social life.

In line with our discussion earlier on socio-economic changes in the 1950s, the so called "mobility turn" refers to the world as being driven by movement, a world on the move (Sheller & Urry, 2006; Urry, 2007).[21] Out of this phenomenon, a "new mobile sociology" has emerged, together with a "new mobilities paradigm", based on mobile practices, relations and a language of mobility, rather than on territorially fixed societies, subjects and structures (Sheller & Urry, 2006; Szerszynski & Urry, 2006; Urry, 2007). In this context, mobility does not constitute one aspect of contemporary social life only. It is rather a set of principles characterizing social relations and economic practices.

Mobility is much like the notion of space and time, it can be found in everything (Adey, 2010). It does not involve only the movement of individuals. It involves the movement of ideas, knowledge, information, beliefs, experiences, processes, goods, images, capital and more. In other words, mobility can no longer be limited to physical movements of individuals or subjects. But rather, we refer to a horizontal social, cultural and economic mobility, where societies enjoy the benefits this movement has to offer.

At the same time, mobility is part of a wider automation of daily life and the culture of freedom in the USA that emerged in the 1950s and 1960s. In this context, cash is not necessarily irreplaceable. Automation and digital payments are becoming rooted in social formation, not as some independent technologies and strategies but as central components in the evolution of a digital reality; an emerging digital lifestyle. Mobile payments, contactless transactions, social media platforms, the electronic marketplace, among others, are becoming the main arena of social transformation, shaping thus the cashless economy and the subjugation of society to the

[21] See also Castells (2001); Wajcman and Rose (2011).

capitalist exchange relations. They are all part of a globalised, “network society” and “a new social structure in the making”:

“Because networks do not stop at the border of the nation-state, the network society constituted itself as a global system, ushering in the new form of globalization characteristic of our time” (Castells, 2001, p. xviii).

The proliferation of automation and digitalization in cashless payments, social media platforms, interactive gaming, self-checkouts at points of sale, self-interaction with ATMs and others draws upon \the active participation of their users and consumers. Thus the transformation of retail payments into cashless/digital media and the overall process of automation of daily life, builds upon individuals (such as bank customers) that actively participate in the realization of the extraction of value while the generation of profit benefits from free labour.

For instance, Andrejevic (2009) explains how web platforms such as YouTube offer to users a degree of control over the product of their creative activity. At the same time, users perform unpaid labour in building up online community and sociality upon privately controlled network infrastructures while allowing themselves to be monitored. In this process of cultural production, private ownership is transformed into a commodity.

Similarly, the time spent in Facebook linking to friends' profiles, uploading and "tagging" friends in photos, creating and joining groups, posting events, website links and videos, maintaining a nice profile and writing public notes, generates income to the platform as it can sell more accurate and better targeted marketing information. It’s all part of a bottom-up creative cultural discourse, which is the extension of the socio-economic and technological developments as well as the human progress under post-Fordism conditions. The central element in this process is the role of consumer as co-producer.

According to Bonefeld (2001), human cooperation becomes possible when liberated from its antagonistic relations with capital. Participation in automation by social individuals who are in control of their social conditions is a classic example of increase in the productive power of the individual, by means of cooperation and through the collective power of the masses. A process that constitutes the alienation of human social practice from his/her conditions. At the same time, sites such as Facebook, have a tendency toward capital accumulation and penetrative commodification rather than a revolutionary re-distribution of wealth and control (Cohen, 2008). In this context, primitive accumulation is not only a pre-history of capitalism but also a persistent element in contemporary market forces through the dynamic interplay between automation, mobility and movement.

Here, we have argued, is exactly where the major source of advantage lays for cashless and digital payments. The territory over which cashless systems operate is networked; it’s local and globalised; it’s fast and widespread; and more so than anything else, automated. The way that life and consumption patterns have been transformed by automation and mobility make the internationalisation of money necessary. In a globalized, automated and mobile world, money should be free from cultural, societal, structural and geographical constrains. Plainly, this choice is offered by cashless payment systems rather than those based on cash.

Discussion and Conclusions

In the first part of the paper we examined the emergence and diffusion of paper money through the imposition of wage labour upon populations in medieval Europe using Marx's primitive accumulation idea. In addition, we used a number of critical texts to explain the extension of primitive accumulation through a socio-economic transformation that offered fertile ground to cashless/checkless payments in the 1950s. In this context, as we argued earlier, Marx's theory of primitive accumulation may be seen to contain both an historical and a continuity argument. In other words, primitive accumulation is not just a period of transition that led to the development of capitalistic socio-economic relations (Bonefeld, 2001; Dalla Costa & Dalla Costa, 1995; De Angelis, 2001; Perelman, 2001). It is also a set of forces that permanently reproduce accumulation and capital's existence. Similarly with the imposition of wage labour and cash in the primitive accumulation era, digital payments seem to be part of market forces and government policy that makes their use an integral part of socio-economic relations.

Contemporary forms of primitive accumulation, of course, occur in different contexts, and are manifested through forms, that are quite different from those in late medieval Europe (De Angelis, 2001). As we explain below, if the future of money and the world itself is likely to be cashless, this is empowered and reinforced by the automation, mobility and movement of our daily life.

Within this new order, cashless payments, mobility and automation are inseparably part of social constitution upon which this coexistence is founded and through which it subsists. With this we don't mean that people replace cash for cashless payments. Rather, they adopt the one that is more suitable for the transaction given a particular context and payment situation. For instance, paper money is convenient as a medium of exchange; untraceable, easy to handle, anonymous, reliable and widely accepted. Importantly, cash is more than welcome when other payment methods fail during power outages and natural disasters. At the same time, cash has its own disadvantages as it is not practical for large transactions. Also, it is difficult to track when it comes to tax collection or law enforcement.

But given the continuously changing socio-economic landscape, it seems that the future of money lays in a strategically cashless orientation. In the same way that market forces replaced primitive accumulation as a disciplinary device enforcing the separation between labour and means of production (Perelman, 2001), the participatory culture and automation are likely to help digital money outpace cash. The continuity of primitive accumulation in mature capitalist economies can be traced in the essential character of digital payments as central means for capitalist accumulation.

Today's global 'cosmopolitanization' (Urry, 2007, p. 5), the prevalence of automation, the mass geographic mobility and, more broadly, the world being on the move, are all indicators of a fundamental redefinition of established social, political and economic structures and relations (Beck, 2007; Beck & Sznaider, 2006; all cited in Jeanes, Loacker, Sliwa, & Weiskopf, 2006, p. 2). Cashless payment are not just another dimension in the networked, automated and mobile society. Given the dominant role of market forces in society, digital payments are likely to drive the society to becoming absolutely cashless. We dare to say that in the future, cashless means will no longer be a convenient companion but rather one's sole payment companion.

References

Adey, P. (2010). *Mobility*. London: Routledge.

Andrejevic, M. (2009). Exploiting YouTube: Contradictions of User-Generated Labour. In P. Snickers & P. Vonderau (Eds.), *The YouTube Reader* (pp. 406-423). Stockholm: National Library of Sweden.

Bátiz-Lazo, B., & del Angel, G. (2016). *The Dawn of the Plastic Jungle: Lessons from the first credit card in Europe and North America, 1950-1975*.Unpublished manuscript, Stanford, CA.

Bátiz-Lazo, B., & Effthymiou, L. (forthcoming 2016). The 360 Degrees of Cashlessness. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Bátiz-Lazo, B., Haigh, T., & Stearns, D. L. (2014). How the Future Shaped the Past: The Case of the Cashless Society. *Enterprise & Society, 15*(1), 103-131.

Bátiz-Lazo, B., & Moretta, T. (forthcoming 2016). Mondex and VisaCash: The first (failed) attempt at an electronic purse. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Beck, U. (2007). Beyond class and nation: Reframing social inequalities in a globalizing world. *British Journal of Sociology, 58*(4), 679-705.

Beck, U., & Sznaider, N. (2006). Unpacking cosmopolitanism for the social sciences: A research agenda. *British Journal of Sociology, 57*(1), 1-23.

Beckert, S. (2014). *Empire of Cotton: A Global History*. New York, NY: Alfred A. Knopf.

Bell, S. (2001). The Role of the State in the Hierarchy of Money. *Cambridge Journal of Economics, 25*(149-163).

Billings, M., & Booth, A. E. (2011). Techno-Nationalism, the Post Office and the Creation of Britain's National Giro. In B. Bátiz-Lazo, J. C. Maixé-Altés & P. Thomes (Eds.), *Technological Innovation in Retail Finance: International Historical Perspectives* (pp. 155-172). London: Routledge.

Bloch, M. (1967). *Feudal Society: The Growth of Ties of Dependence*. London: Routledge & Kegan Paul Ltd.

Bonefeld, W. (2001). The Permanence of Primitive Accumulation: Commodity, Fetishism and Social Constitution. *The Commoner, 2*(9), 1-15.

Bryan, D., & Rafferty, M. (2016). Decomposing Money: Ontological options and spreads. *Journal of Cultural Economy, 9*(1), 27-42.

Carhcart-Keays, A. (2016, May 5, 2016). Story of cities #36: How Copenhagen rejected 1960s modernist 'utopia'. *The Guardian*.

Castells, M. (2001). *The Rise of the Network Society*. Oxford: Blackwell.

Cohen, N. S. (2008). The Valorization of Surveillance: Towards a Political Economy of Facebook. *Democratic Communique, 22*(1), 5-22.

Coquery-Vidrovitch, C. (1969). French colonization in Africa to 1920: Administration and economic development. In L. H. Gann & P. Duignan (Eds.), *Colonialism in Africa, 1870–1914: The History and Politics of Colonialism, 1870–1914 (Vol. 1)*. Cambridge: Cambridge University Press.

Dalla Costa, M., & Dalla Costa, G. F. (1995). *Paying The Price. Women and the Politics of International Economic Strategy*. London: Zed Books.

De Angelis, M. (2001). Marx and Primitive Accumulation: The continuous Character of Capital's Enclosures. . *The Commonner, 2*(9), 1-22.

del Angel, G. (2016). *Cashless Payments and the Persistence of Cash: Open Questions About Mexico*.Unpublished manuscript, Stanford, CA.

del Angel, G. (forthcoming 2016). Limits to Cashless Payments and the Persistence of Cash. Hypotheses about Mexico. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Deville, J. (2013). Paying with Plastic: The Enduring Presence of the Credit Card. In J. Gabrys, G. Hawkins & M. Michael (Eds.), *Accumulation: The Material Politics of Plastic* (pp. 87-103). London: Routledge.

Espinosa Cristia, J. F., & Alarcón Molina, J. I. (forthcoming 2016). CajaVecina: The Bancarization of Chile through Corner Shops. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Fieldhouse, D. K. (1971). The economic exploitation of Africa: Some British and French comparisons. In P. Gifford & W. R. Louis (Eds.), *France and Britain in Africa: Imperial Rivalry and Colonial Rule*. New Haven, CT: Yale University Press.

Forstater, M. (2005). Taxation and primitive accumulation: the case of colonial Africa. *Research in Political Economy, 22*, 51-64.

Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison* (A. Sheridan, Trans.). New York, NY: Vintage Books.

Fullwiler, S. T., Bell, S., & Wray, L. R. (2012). *Modern Money Theory: A Response to Critics*.Unpublished manuscript, Kansas City, Mo.

Gelderblom, O., & Jonker, J. (2016). *Enter the ghost: cashless payments in the Early Modern Low Countries, 1500-1800*.Unpublished manuscript, Utrecht.

Giddens, A. (1990). *The Consequences of Modernity*. Redwood City, CA: Stanford University Press.

Graeber, D. (2011). *Debt: The First 5,000 Years*. New York, NY: Melville House Publishing.

Harvey, D. (1989). *The Condition of Postmodernity*. Oxford: Blackwell.

Harvey, D. (2005). *A Brief History of Neoliberalism*. New York NY and Oxford: Oxford University Press.

Hollow, M. (forthcoming 2016). Pre–1900 Utopian Visions of the 'Cashless Society'. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Humphrey, D. B. (1996). The Economics of Electronic Benefit Transfer Payments. *Federal Reserve Bank of Richmond Economic Quarterly, 82*(2), 77-94.

Jeanes, E., Loacker, B., Sliwa, M., & Weiskopf, R. (2006). Mobilities in contemporary worlds of work and organizing. *Ephemera, 15*(4), 705-723.

Lee, N. (1967). Tomorrow's Checkless, Cashless Society: the Problems, the Solutions, the Benefits. *Management Review, September*, 58-62.

LeRoy Ladurie, E. (1974). *The Peasants of Languedoc* (J. Day, Trans.). Urbana, Ill: University of Illinois Press.

Marx, K. ([1887] 2015). *Capital: A Critique of Political Economy (Vol I)*. Moscow, USSR: Progress Publishers.

Mayhew, A. (2011). Money as Electricity. *Journal of Cultural Economy, 4*(3), 245-253.

Papadopoulos, G. (2015). Currency and the Collective Representations of Authority, Nationality, and Value. *Journal of Cultural Economy, 8*(4), 521-534.

Perelman, M. (1991). *Information, Social Relations, and the Economics of High Technology*. London: Macmillan.

Perelman, M. (2000). *The Invention of Capitalism*. Durham, NC: Duke University Press.

Perelman, M. (2001). The Secret History of Primitive Accumulationand Classical Political Economy. *The Commoner, 2*(9), 1-21.

Polanyi, K. ([1944] 1957). *The Great Transformation: The Political and Economic Origins of our Time*. Boston, MA: Beacon Press.

Sanroman, G., & Santos, G. (forthcoming 2016). Who Holds Credit Cards and Bank Accounts in Uruguay? Evidence from Survey of Uruguayan Households. In B. Bátiz-Lazo & L. Effthymiou (Eds.), *The Book of Payments: Historical and Contemporary Views on the Cashless Economy*. Basignstoke: Palgrave-Macmillan.

Seltzer, V. (1994). *The Social Meaning of Money*. Princeton, NJ: Princeton University Press.

Sheller, M., & Urry, J. (2006). The new mobilities paradigm. *Environment and Planning A, 38*(2), 207-226.

Sørensen, A. R. (2016). Monetary organization and national identity: a review and considerations. *Journal of Cultural Economy, 9*(2), 173-185.

Szerszynski, B., & Urry, J. (2006). Visuality, mobility and the cosmopolitan: Inhabiting the world from afar. *British Journal of Sociology, 57*(1), 113-132.

Thomas, C. Y. (1984). *The Rise of the Authoritarian State in Peripheral Societies*. New York, NY: Monthly Review Press.

Urry, J. (2007). *Mobilities*. Cambridge: Polity Press.

Vries, P. H. H. (2002). Governing Growth: A comparative analysis of the roleof the state in the rise of the West. *Journal of World History, 13*(1), 67-138.

Wajcman, J., & Rose, E. (2011). Constant connectivity: Rethinking interruptions at work. *Organization Studies, 32*(7), 941-961.

Wood, C., & Salter, J. (2013). *The Power of Prepaid*. London: Demos.

Wood, E. M. (2002). *The Origin of Capitalism: A Longer View*. London: Verso.

Wray, L. R. (1990). *Money and Credit in Capitalist Economies: The Endogenous Money Approach*. Cheltenham: Edward Elgar.

Wray, L. R. (2004). *Credit and State Theories of Money: The Contributions of A. Mitchell Innes*. Cheltenham: Edward Elgar.

Yavitz, B. (1967). *Automation in Commercial Banking*. New York: Free Press.

Title
(Bold, Times New Roman 10)

1. Introduction[22]
(Section headings, Bold Times New Roman 10)

Text
(Regular, Times New Roman 10)

Footnotes: Bottom of page, Regular Times New Roman 8)

[22] Footnotes (Regular, Times New Roman 8)

References
(Bold, Times New Roman 10)

Reference Style:

Adopt the style of the Elesvier journal **Economics Letters**, which is one of the simplest.

Examples:

*Journal*s:

Krueger, A. B. and J. Maleckova, 2003, Education, poverty and terrorism: is there a connection?, Journal of Economic Perspectives 17, 119-144.

Books/Monographs:

Krueger, A.B., 2007, What Makes a Terrorist? Economics and the Roots of Terrorism. (Princeton University Press, Princeton, NJ).

Contributions to books:

Krueger, A.B. and D.D. Laitin, 2008, ‘Kto Kogo?: A cross-country study of the origins and targets of terrorism, in: P. Keefer and N. Loayza, eds., Terrorism, Economic Development, and Political Openness (Cambridge University Press, Cambridge) 148-173.