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Abstract:

The article revisits the theories on the ontology of money to find out how the different approaches to the nature and origin of money explain the monetary diversity of Argentina during the crisis of 1998-2002. It first discusses several approaches to the nature of money - commodity money, credit money, state money and money as an institution- in search for theoretical elements to understand that phenomenon of monetary plurality. In the context of a severe fiscal and financial crisis at that time, parallel monetary circuits emerged at the national, sub-national and local community levels. Any given household in Argentina would use, store and count value in several currencies that were not fully convertible to each other. Several elements of the heterodox approaches to the nature of money are combined to understand why monetary plurality sustained a large modern economy, a fact that is at odds with the orthodox view that monetary plurality increases transaction costs. The article contends that provincial currencies emerged as circulating debt that depended on federal sovereignty and subnational tax collection capacities. In the meantime, community currencies started as units of account to facilitate trade among neighbours, who could not conceive of any commodities that would serve as general means of payment. These currencies were pure credit monetary circuits, in Schumpeter's definition. The initiators adopted the role of issuers, however imperfectly, and the currencies took the extrinsic value of the products exchanged. The fact that several currencies of diverse monetary origins circulated at par for several years shows that monetary plurality may be less exceptional if states did not take concrete efforts to supress monetary plurality. Moreover, it raises doubts on whether monetary plurality is not best equipped to satisfy the diverse monetary demands for various usages, localities and social groups, especially during severe economic and monetary distress.

1. Introduction

The case of Argentina at the turn of the Millennium, with five different types of currency circulating along each other and sometimes in overlapping geographical areas, seems to defy the notion that each country should have only one type of money. There is nothing new in this statement; monetary plurality has been pervasive throughout history (Kuroda, 2008) and in recent years it has been on the rise with an unseen increase of complementary currencies (Blanc, 2012). There are hardly any economic theories to justify that countries should have a single currency and in terms of economic organisation, the institution of one country = one currency is a relatively newcomer (Gilbert and Helleiner, 1999). A widely accepted explanation for this belief in one type of money as the most efficient solution refers to the high transaction costs of using different currencies. However, the creation of a currency may have no relation to notions of efficiency, reduction of transaction costs and so on. Money is an institution, characterised as a social relation that structures economic action (Gilbert, 2005; Ingham, 1998, 2004; Smithin, 2000). As any other institution, money emerges in specific historical contexts and situations in which it represents a contingent solution to a temporary problem that may become permanent or pervasive by practice. When approaching the monetary practices of agents, it is easy to observe that these are much more nuanced than the theories to interpret money. Consequently, the study of money has attracted the interests of sociologists and anthropologists who based their studies on the daily economic practices of agents and have drawn attention to the diversity of its usages and meanings, and the many exceptions that escape any single conceptualization of money outside specific contexts (Dodd, 2005, 2014; Zelizer, 1994).

During the crisis of the Millenium, the Argentine economy functioned with as many as five currencies. Economic agents matched currencies with their payments, so a division of labour emerged among currencies depending on the type of transactions, functionality, habit, and legal restrictions. This paper discusses the case of Argentina between 1995 and 2005. It proposes that far from increasing transaction costs, monetary plurality reduced the uncertainty created by the economic demise in Argentina. Economic agents managed to keep the different types of currencies separated by usage, geography and habit, and in the middle of a severe economic crisis monetary plurality had a positive effect on keeping the economy functioning.

Several currencies circulated at the national, sub-national and local community levels in Argentina and the phenomenon of monetary plurality was particularly pervasive during the deep economic and political crisis between 1998 and 2002. All currencies were used as units of account to measure prices and contracts in several parallel 'currency circuits' (Kuroda, 2008). Any given household in Argentina in those years would use, store and count value in several monies that were not fully convertible to each other because of their social network and geographical boundaries. This research will revisit the theories on the ontology of money to find out how the different approaches to the nature and origin of money explain the monetary diversity of Argentina. The monetary plurality of Argentina is poorly studied and it has been dismissed for its uniqueness without a real understanding of what it reveals on the nature of money.

The primary data used in this article is part of a database built within a larger on-going research project started in 2001 (Gomez, 2009)[1]. Complementary Currencies were studied via extended interviews, surveys, focus groups and ethnographic methods. The article first presents a bird's eye view on the theories of money and continues with the analysis of Argentina's currency circuits at central, provincial and community levels. In sections three to five, the analysis discusses how the monetary practices in each of these three currency circuits relate to the theoretical approaches and concludes with empirically-grounded reflections on the ontology of money.

2. Approaches to the origins and meanings of money

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In order to understand Argentina's monetary diversity, this section provides a succinct eye-view of the main constituent elements of four approaches to the origin and nature of money, namely the commodity, credit and state approaches to money, as well as the perspective of money as institution. It will neither delve into any of them specifically nor engage in the debate between them, because abundant scholarly material has already been produced (Bell, 2004; Dodd, 2014; Goodhart, 2006; Ingham, 1998, 2004; Rochon and Rossi, 2003; Smithin, 2000; Swanke, 2004; Tymoigne and Wray, 2006; Wray, 1998) and because such a goal is beyond the scope of the article.

Analysis into the ontology of money goes back to Aristotle's first commodity theory (Schumpeter, 2006 [1954]) in which money was conceived as a 'thing' with intrinsic value that acts as medium of exchange for all transactions. In the same vein, Adam Smith (1996 [1776]) contended that eventually all nations chose metal as general means of payment to sustain exchanges. Menger (1892) added that metal coinage evolved spontaneously as money because it was scarce, durable and easy to carry, and contended that all-purpose money reduced transaction costs and emerged around the European Middle Ages because 'their saleableness is far and away superior to that of all other commodities' (Menger, 1892, p. 252). The idea that a commodity gives value to money subsisted until the golden standard was abandoned but its advocates still maintain that agents behave towards money in a similar way as if money was a scarce commodity of intrinsic value or its direct symbol, a thing that is exchangeable for all others (see Ingham, 2004). The commodity theory of money has been criticised both empirically and analytically by scholars like Wray (1998) and Ingham (2004). From an analytical point of view, the authors underlined the implausibility that a unified abstract measure could have resulted from a spontaneous market process. From an empirical point of view, Boyer-Xambeu and others (1994) noted that the coinage of the Middle Ages, debased and chipped, could hardly be a superior alternative to bartering.

Alternative theories have existed since the mid-seventeenth century and revived in periods in which money was not backed by bullion (Ingham, 1998, 2004). Heterodox economists argue that money did not emerge out of barter but out of the obligation to cancel debts (Wray, 1998). Money is a symbol of credit, a promise to pay that originates as an abstract unit of account in which debts are measured and denominated. When banks evolved in Northern Italy, they became clearinghouses than could create money 'with the stroke of a pen' (Glasner, 1998). Bankers kept coins, and issued bills of credit while they kept gold in store. Eventually they issued more bills than the actual coins they had in stock, because they could balance the deposits of one client with the payments of another. Bills of credits continued to be nominated but they were transferable, so it was possible to balance them out with other customers and bankers. Bills were detached from any relationship to actual commodities and began to serve as autonomous media of exchange. The value of these liabilities depended on the willingness of people to hold them, not by the amount of bullion deposited in the banks (Glasner, 1989). While these larger transactions were conducted on the basis of credit, the majority of the population used barter for local and small trade within parallel currency circuits (Wray, 1998).

The conceptualisation of money as credit highlights extended networks of mutual liabilities with depersonalised and transferable promises to pay in which the most creditworthy notes are kept as base-money to sustain the system. Social networks with high trust were initially needed to guarantee that credits would be honoured, but institutions gradually defined the creditworthiness of credit money (Ingham, 1999). Schumpeter (2006 [1954]) considered that the transformation of long-term debt and other illiquid assets into short-term instruments was a core capitalist practice that produced a critical qualitative transformation in the monetary social relations. Keynes (1930) also argued that the transition to the full transferability of bills of exchange was a major structural step in the evolution of money: while barter is bilateral, transferable money makes it possible to hold an extensive multilateral decentralised market. Keynes (ibid) emphasised the unit of account aspect of money as its prime function to measure debts, contracts and prices across time and space. Third party debts could be cancelled by other third party debts. Innes (1914, quoted in Wray, 1998) argued that creating money is an accounting operation of a creditworthy agent, the convergence of an act of crediting the client's account (thus creating a liability for the bank) and crediting the bank for the amount of the loan (thus creating an asset for the bank). Later on, Simmel (1982 [1978]) referred to a 'maximum authority' that regulates credit and money.

One of the versions of the credit theory of money is the monetary circuit approach, which argues that banks give credits to firms that expand wealth in a production process, by which promises to pay are issued and subsequently circulate as money (Graziani, 2003; Realfonzo, 2006; Rochon and Rossi, 2003). There is an influx of money in the circuit when the credit is issued and an outflux when it is repaid, and between those two moments credit-money circulates to pay for wages and so on, and this generates a sequential chain of transactions. All accounts in the chain are settled in the original unit of account to ensure viable circulation. There are three types of actors in this approach: the banks that give credit and create money, the firms that contract debt and create wealth, and the general public that use these claims as money. The state's role is to define rules of creditworthiness that authorise banks to issue credit, while the state may be an issuer itself to pay for its own debts. In this approach, money has 'extrinsic value' derived from the production it enables (Wray 1998). Taxes are a part of the wealth created, so the implication is that money pre-exists taxes and the state. According to Graziani (2003: 2), the first description of a 'monetary circuit' corresponded to Wicksell and influenced Schumpeter's approach of endogenous money.

Other accounts on the ontology of money place the state at a much central role and sustain that money is that which the state selects as unit of account to denominate what it accepts at public pay-offices for tax payments (Knapp, 1973 [1924]; Wray, 1998). This perspective was called Chartalist approach to reflect that money is a token or 'carta' born from the state's actions to develop standardised coins. It posits that kings and other authorities coerced private issuers to integrate other currencies under their coinage and paper money (Goodhart, 1998). Moreover, if more than one currency existed, the acceptance by the state would define a hierarchy between them in relation to its convertibility to the state money, but the rule of law and force were generally used to guarantee a monopoly on the issuance of money for the state (Wray, 2004). In the nineteenth century, 'the forging of national uniformed monetary systems was a central project undertaken by states across the world' (Gilbert and Helleiner, 1999): 4). State money, therefore, serves as a symbol of sovereignty (Goodhart, 2006), and Aglietta and Orlean (2002) underline that sovereignty is the foundation of money so it cannot be understood without reference to a legitimate authority. This approach identifies two types of social actors in the monetary system: those who make money (the state and its intermediaries, the banks) and the public that uses it.

The Chartalist approach, however, faces a gap in explaining the historical period of a few thousand years in which there was money but no state (Dodd, 2014; Polillo, 2011), so it basically explains 'modern money'. Means of payment were accepted in trade long before there were official monetary systems, before nation-states used it as a symbol of sovereignty and before they collected taxes (Seyfang, 2001), and mainly as social constructions that expressed long-standing relations at the local level. Moreover, centralised money was unnecessary because the poor used barter and low denomination tokens, often privately issued and not easily convertible into the official money of the wealthy but still reinforcing the habit of using abstract means of payment for transactions (Gilbert and Helleiner, 1999). Ingham (2004, p. 12) critically indicates that money is an institution, a social relation that 'is accepted by convention, is underpinned by trust, has definite social and cultural consequences'. Ingham continues that money is a claim or credit between the possessor and the issuer, and has social existence independently of the production and exchange processes because it can be transferred to other users to cancel all other debts within geographical boundaries. Like any institution, money is 'out there' at the social level while it guides the economic action of individuals (Hodgson, 2006). Institutions create mutual expectations so each other's actions become 'self-enforcing', in the sense that individuals follow institutions, which they have meaning at the social level, so other agents expect institutions to be followed (Greif and Kingston, 2011, p. 27). Finally, money generates balances and imbalances of power and it is in itself a 'transformative power' (Ingham, 1999, p. 80).

The approaches to the ontology of money presented here are not always mutually exclusive but clearly emphasise different aspects of the nature of money. The article will now relate elements of the four approaches to the Argentine currency circuits.

3. The Argentine state monies

In Argentina, money has not been an untouchable institution of the state for a long time, while policymakers struggled to control inflation and financial instability. Since the 1950s a broad menu of anti-inflationary policies had been tried and yet two-digit inflation rates had become normal. Given the regular fall in the value of the currency, Argentineans –including the government– have a peculiarly flexible understanding of money as a social construction. What was socially accepted as money was as much a matter of social judgement as of political decision. For instance, in the winter of 1962 the government paid civil servants their wages in bonds instead of official money (Cortes Conde, 2005). In the 1980s two small provinces (Tucumán and Jujuy) issued debt bonds when they could not pay their employees' wages, and these bonds were locally accepted as money (Schvarzer and Finkelstein, 2003). Shopkeepers referred to provincial money as 'hot bread' to express their desire to get rid of them quickly, but they could pay provincial taxes with them and in Tucumán they continue to circulate. The search for a 'harder' currency gradually led agents to adopt the US dollar as a second currency. At first dollars were used as unit of account to nominate high-value goods such as houses or to stabilise the value of contracts, but later on dollars were preferred to settle regular payments. For five decades, on each occasion that inflation started rising, agents would flee to the dollar to protect the value of their goods for sale and savings.

The inflationary problem became extremely serious with three hyperinflations between May 1989 and the end of 1990. The then Economy Minister, Domingo Cavallo, emphasised that the top policy priority in 1990 was to 'reconstruct the institutions regulating the relationship between the population and money, the monetary system and monetary-defined property rights' (Cavallo, 1999). Cavallo contested that the source of inflation was the quantity of money and posited that the real cause was the quality of money. In 1991 the government implemented a currency board that pegged the peso to the US dollar at par, and allowed the free circulation of both currencies. The financial system would no longer have a lender of last resort, so in practice the monetary base would be aligned with inflows of foreign currency. Convertibility allowed agents to choose freely what currency they wanted to use and achieved what no other stabilisation plan could do in the past in Argentina: inflation disappeared for a decade and the credibility of the peso was restored.

A common interpretation of this success is that the currency board controlled the amount of money in the economy, referring to the monetary base, and the Central Bank was a neutral actor that transformed dollars in its vault to pesos in the public's pockets. It is not the aim of this paper to engage in that discussion but to offer an alternative explanation based on the Chartalist theory of money. The policy signalled that the Central Bank was the maximum monetary authority with privileged direct access to the most sought-after promise to pay (dollars), so in fact it placed the Central Bank in a position to issue its own credible promise to pay (pesos). Other currencies emerged later on, but not from the Central Bank.

Monetary reform was implemented together with an ambitious liberalisation programme (Kosacoff, 1993) that led the economy to high and sustained growth rates, until in 1995 a major economic crisis hit the 'modernised' Argentina. The peg to the dollar almost collapsed but was saved at the cost of a recession that skimmed five per cent off the national product. The financial crisis also introduced many Argentines to the traumatic novelty of not having a job, with a record unemployment rate of 18.8 per cent. The term 'hyper-unemployment' was coined and induced a moment of awareness on the social effects of the reforms. The economy rebounded briefly in 1997, but in 1999 it started the longest and deepest recession in Argentine history, with a fall of 20 per cent of the GDP between 1998 and 2002 (Gerchunoff and Llach, 2005).

4. Provincial currencies

Provinces would get extra funding from the central government in situations of budgetary distress, but the central government was in no position to help them. When the province of Buenos Aires was on the brink of a default, it sought a loan from a consortium of national banks. These denied the credit but came up with an alternative plan. They would loan one third of the funds, while another third would derive from budget cuts and the last third could be covered with debt bonds. The province accepted the scheme and issued promises to pay in the form of bonds of low denomination which were used to pay part of the wages of public servants. Workers hence became creditors of their employer. The main fear of the governor was that the bonds would not keep at par with the peso and the dollar, but this did not happen. Chelala (2003) explains that the provincial bonds kept their value because of the depth of the economic decline –any currency was better than no currency at all– and because the bond paid an attractive 7% interest rate and could be used to pay provincial taxes.

With squeezed budgets, a dozen other provinces decided to follow and issued their own currency to pay wages instead of further reducing spending. They were then referred to as '*cuasi*-currencies' (Schvarzer and Finkelstein, 2003) because bonds circulated locally as surrogates for the national money. In September 2001, the provincial currencies represented 5 per cent of the national monetary base but as the crisis aggravated and local tax revenues decreased, provincial currencies climbed to 25 per cent of the national monetary base in January 2002 and 33 per cent in October 2002 (Chelala, 2003). In fact, the provincial currencies first created debt and it later became currency. Provincial public servants had claims on the provincial government for the labour done, but the provincial government did not have funds to settle these claims. Another claim in these 'currency circuits' (Kuroda, 2008) was the obligation of every inhabitant and business in the territory to pay provincial taxes. The governors hence completed a credit circuit: the issuance of provincial currencies settled one claim against another claim and by denominating them in their own unit of account the provincial governments had created sub-national money. The bonds had no intrinsic value and were backed by no specific commodity, they were 'circulating debt' (Schumpeter, 2006 [1954]).

Taking a Chartalist perspective, while the central state was squeezing provincial expenditures to the point of endangering the provision of basic public services to its citizens, the governors used the issuance of currency as a tool to defend their sovereignty in what Théret and Zanabria (2009) call 'monetary federalism'. Chelala (2003) adds that most of the governors that issued currency were from the opposition party, and the issuing of currencies can be understood as a claim of autonomy from the central state. Tax collection is an aspect of sovereignty that extends to the provincial level and became central in producing subnational money. There was neither a specific demand for bonds on the side of the workers nor did they desire to become creditors of the provincial government, yet their legitimate claim for wages was settled with a promise to pay of the authority. Concurring with Gilbert and Helleiner's analysis (1999), the issuance of currency strengthens sovereignty, and the Argentine governors made a pragmatic interpretation of their sovereignty at subnational level by issuing debt which became currency.

Heterodox approaches to money contend that money is a non-neutral 'force of production' (Minsky, 1986, quoted in Ingham, 2004) and in Argentina, debt bonds circulating as currencies succeeded in reactivating the regional economies. Several municipalities were also studying the policy when an agreement between the governors and the central government attempted to control the proliferation of 'cuasi-currencies'. The agreement introduced a new bond called Bills of Provincial Debt Exchange. The Bills were a promise to pay issued by the national Treasury and were meant to replace provincial bonds in settlement for the wages of public servants. These would substitute provincial bonds as these flowed back to the provincial treasuries. The first issuance of Bills for 2001-2002 was calculated at the total payroll of all provinces in one year, which was USD 1000 million. The Central Bank took no part in the policy and the Bills circulated along the pesos and the provincial currencies still in the hands of the public.

While in violation of the agreement, most provinces continued to issue their bonds to settle payments with suppliers, so they used their own currencies and the Bills at the same time. Some governors failed to understand soon enough that the acceptance of provincial currencies was limited to their capacity to collect taxes, as may be predicted from a Chartalist perspective. Supermarkets, for example, accepted bonds as means of payment for their sales because they could use these at par to pay for taxes. When the amount of bonds increased beyond supermarkets' tax obligations, they started rejecting them or took them at a fraction of their nominal value. The bonds devalued in relation to other currencies and were rejected.

Innes assertion that 'a dollar of money is a dollar… because of the dollar to pay the tax', (1914: 152, quoted in Ingham, 2004: 84) implies that when issuance goes beyond the tax obligations, currencies are no longer accepted as redeemable claims. In some provinces, the cuasi-currencies became a reactivating success, close to the characterisation of money as a 'force of production' by Minsky (1986, quoted in Ingham, 2004). In other provinces, over-issuance ended in hyperinflation and chaos, which substantiates Ingham's claim that the value of money as a social relation relies on keeping the flux of value running (2004: 83).

5. Community currencies: money without the state?

Besides the Central Bank's peso, the Treasury's Bills, and twelve provinces' bonds, the Argentine public also had a number of privately-issued vouchers to pay for lunches and petrol, for example, in listed shops. They were one-purpose monies, so they as not part of the analysis here. A much more important family of currencies were the community currencies that circulated after 1995 and were used by about 20% of the Argentine population in 2002, by some estimates (Ovalles, 2002).

The *Redes de Trueque* (RT) was the name given to the Argentine Complementary Currency Systems and was one of several income-generation schemes launched in reaction to the neoliberal structural reforms (Gomez, 2009; Pearson, 2003). The first group was established with 30 neighbours in a former industrial suburb of the city of Buenos Aires in 1995. It was a spin–off of the work of two environmentalist NGOs which promoted urban vegetable gardens[i]. At some point, the neighbours started making jams, preserves and so on with the uneaten produce and exchanged these goods with each other. The initiators thought it would be a good idea to organise it carefully and tried several schemes in what one of them called 'painful trial and error' (Interview with Covas, 11/6/2004). By May of 1995, the method was fixed. The organisers used a paper notebook in which they registered the products offered for exchange in the weekly meetings and credited each trader with the estimated value of their contribution, after which the traders chose products to take home. The remaining balances were transferred to subsequent meetings but were usually small. They used a fictional unit of account to price goods –not pesos– to indicate that it was not a market but neighbours doing barter-alike exchanges. Prices were never at par with those in pesos and blended notions of fairness, gift and market exchange prevailed. The internal unit of account was given the significant name of *crédito* to reflect their interpersonal trust and existed only on a paper notebook with the credits and debits in the participants' accounts. In short, the scheme was based on mutual credit as an improvement on barter in a closed circle of trust.

All three initiators and five participants of the original scheme were interviewed during fieldwork and were asked why a fictional unit of account was created, instead of using a commodity of small value as means of payment. The question was invariably found odd and the answers referred to the impossibility of finding a commodity that would be absolutely widespread, meaningful, valuable, small and light-weight to carry. Anything close to this commodity was seen as problematic to keep. 'If it's a basic necessity, then you eat it or use it when you need it. And if it's not, then what's the value, why keep it?' one of the participants reasoned. Moreover, the neighbours wanted to see 'numbers that could be easily compared to other numbers to know the value of things. A commodity that can show information like this doesn't exist' (Interview with De Sanzo, 14/6/2004).

These perceptions substantiate empirically the critique on commodity money posed by scholars like Wray (1998) and Ingham (2004) on the implausibility that one unit of account would have resulted from a spontaneous market process and confirm Keynes's (1930) reasoning that the origin of money was a unit of account to measure prices of goods across time and space. Moreover, a unit of account allowed the neighbours in the *Redes de Trueque* to compare values to their own capacity to pay, as a precondition for trade, while the simple act of exchanging could be performed by interpersonal agreements. The *crédito* was a 'social' unit of account that had institutionalised consequences, as described by Tymoigne and Wray (2006: 3-4), because it was socially recognised and structured new economic practices of exchange within a network (Peacock, 2012). Paraphrasing Keynes (1976 [1930]: 4-5), the *Redes de Trueque* entered the 'Age of Money' without passing a real 'Age of Barter'.

After a few months the three initiators observed that the scheme improved the households' economies and the exchange meetings of Saturdays were constantly adding new products and new members. The supply expanded to other fresh fruits and vegetables, preserves, homemade meals (for example, pizzas and pastas), pastries (bread, croissants, cakes), handicrafts (knits and paints), home-made toiletries (shampoos and soaps), and even beer. The initiators felt that the full potential of the scheme would be reached if the scheme grew beyond its uniqueness and started searching for partners. They succeeded in replicating the scheme and four more groups were settled across Buenos Aires by the end of 1996, all five using a single unit of account and one notebook. The five groups wanted to stay articulated to enable trade across the network, but recording so many transactions was too burdensome for the initiators. One of them then suggested, 'what if we make money? We can order some notes in a print-shop' (Interview with Ravena, 4/8/2004). Paper currencies were then instituted for each exchange group using the *crédito* as single unit of account to denominate prices. In comparison with the notebook, currencies made payments easier and faster, and facilitated the entrance of new members who also struggled to protect their lifestyles with this little extra income. The currencies were neither convertible to the peso nor backed up by capital in commodities or stronger currency, because none of the participants had such capital. The scheme was defined as 'a social contract among peers' (Interview with Covas, 4/11/2006).

At first sight, it seems a major innovation for a grassroots organisation to print its own money but in Argentina it was a small innovation on the institutionalised practice of juggling with several currencies. For decades, the country had a bimonetary system in which pesos and dollars circulated together. There had been cases of geographically restricted provincial monies since the 1980s (Théret and Zanabria, 2009), and finally the *créditos* were added within social networks. It was social practice to live with two or three currencies, so why not four or five? These currencies -pesos, dollars, provincial quasi-monies, and *créditos*- fulfilled the various basic functions of money, although within restricted geographical and social boundaries.

With time, the scheme became more structured and went from being a curious experiment into an invaluable income option for thousands of households. The organisers issued currency and gave a loan of fifty *créditos* to each new participant to start its trade. The new entrants promised to give the *créditos* back to the issuers if they ever left the scheme. Each new member hence contracted a debt with the issuers, who injected new credit currency at a fixed rate per member. Participants entered the circuit paying a small contribution in pesos, which were used to pay for the printing of the currency. The organisers considered that the value of the injected currency was 'extrinsic' because each entrant would increase the supply in the circuit by a similar amount.

Whenever a new group wanted to replicate the scheme elsewhere in Argentina, the initiators advised them to 'create a closed circuit of exchange', with at least 60 members. Other organisers emerged and replicated the scheme but created their own currencies in separate networks. So, while the regular economy kept declining, the circuits with complementary currencies sustained increases in production and trade across the country and even denominated some contracts (for example, rents and wages). The state did not regulate any aspect of them, including the conditions required to issue *créditos*. By 2001 there were hundreds of trade communities, some isolated with their own currency and others in networks of up to 5.800 locations across the entire country using the initiators' notes. The *créditos* were used by a total of 2.5 million households. They were a social construction that belonged to the fallen middle class of Argentina and allowed it to partially recreate a lost world and make sense of their impoverishment. Community Currencies promoted start-ups, creativeness and self-employment, but also speculation, abuses and inequalities, as has been explained by other research (Gomez, 2010; González Bombal and Luzzi, 2006). Far from being neutral money, the *créditos* were a 'force of production' as defined by Minsky (1986) and at the same time a 'transformative power', as defined by Ingham (1999, p. 80).

Why did this system work for years? The 'closing the circuit' referred by the organisers is the key. It links to the monetary circuit approach, in which firms launch production and start a chain of transactions with suppliers and workers each time a bank provides them a loan (Graziani, 2003; Realfonzo, 2006). In the case of the Argentine complementary currencies, when participants entered the system, they generated new demands for currency and brought new value in goods on sale in the circuit. The organisers then injected currency as an expression of the value that would come in and as a credit with the new entrants who brought it. The organisers acted as the bankers of the monetary circuit, resonating with what Schumpeter called 'circulating debt' (2006 [1954]), because the monetary relationship had no further substance but the trust between users and issuers. Two types of social relations hence resulted in each 'currency circuit': one between the users and the organisers who issued and controlled the currencies and a second one among the users who traded goods. Moreover, the system highlights to what extent money is an institution, a social relation. Complementary currencies established economies of 'pure credit' in the Wicksellian sense, because the currency was nothing but an 'accounting system' organized by the initiators. The *crédito* as social relation became accepted as a social fact 'out there' sustained by thousands of participants. Swanke (2004) notes that once the institution of money is in place, the actors simply forget how it was created and adopt it in their use.

New entrants into the *Redes de Trueque* seemed to have thought that 'someone out there' was controlling the creditworthiness of the system. Indeed, for a while the issuers controlled each other's credit-currencies, but in 2001 the mechanisms of mutual regulation collapsed. This was a third type of social relation that functioned for a while, one developed among issuers who controlled each other's activities. In the meantime, several municipalities accepted *créditos* for local taxes and used them to pay for supplies (Gomez and Helmsing, 2008). During fieldwork several participants expressed that issuers represented a 'creditworthy monetary authority' to them. Local organisers travelled considerable distances to get the complementary currency issued by the initiators in Buenos Aires, because they found them more creditworthy. That currency, in fact, was no more legitimate under the Argentine law than a photocopy, but participants and local organisers assumed that the initiators had 'monetary authority' to print currency. When questioned why they did not print their own complementary currency locally, they replied, 'how could *I* make *créditos*?' and insisted that it was forbidden. Simmel (1982 [1978]) reflected that money emanates from the 'highest representative' of a society, which is normally considered the state, but the Argentine *Redes de Trueque* raise another question on the link between authority and money. The issuing of money as an abstract of value is a 'transformative power' (Ingham, 1999). Perhaps the very act of issuance confers power to the issuers, as a consequence of the belief that they are the monetary authority behind it. Is authority a requirement to issue money, as ne-Chartalists contend, or does the issuance of money create the belief in monetary authority and this is normally captured by the state?

Between 2002 and 2004 the number of participants in the *Redes de Trueque* fell from 2.5 million households to 250.000 (Gomez and Helmsing, 2008). The events that caused the decline have been addressed in detail elsewhere (Gomez, 2009; North, 2007) but are related to the recovery of the regular economy and the welfare state, the massive forgery and consequent hyper-inflation in complementary currency, and the fall in the supply of goods a services in a circuit that was never meant to grow to that scale. The fall reminds of Wray's (1998) emphasis on coercion, a legitimate capacity of the state, in enforcing the acceptance of the money it issues and accepts for taxes. The *créditos* relied on mutual trust, so they could not be legally protected from forgery. Moreover, there is a problem of creditworthiness of the issuers, who were overwhelmed by the massive scale reached by the complementary currencies. In their peak of growth, they stopped keeping records on new entrants and failed to enforce the rules of circulation that they had established. Polillo (2011, p. 444) contends that 'a successful banking strategy is to become the gatekeeper and enforcer of existing boundaries' and the organisers of the *Redes de Trueque* failed to do so. They took the role of the bankers of the monetary circuit, but did not act as such.

Conclusions

The Argentine monetary experience shows three different types of money at the national, provincial and community level, altogether adding to a few hundred parallel currency circuits. This study approached the Argentine monetary diversity from the angle of different perspectives on the nature and origins of money.

The first approach is the commodity theory of money that contends that money derives from the use of a commodity as means of payment. Scholars like Ingham (1998, 1999, 2004) and Wray (1998, 2004) argued that the narrative is implausible and the Argentine case provides empirical evidence for their critique. A group of neighbours that wanted to trade goods without facing the inconvenience of barter did not even consider using a general commodity as means of payment and asserted that such a commodity could not exist. Instead, they created a unit of account that allowed them to measure prices, compare values and assess their needs against the balances in their accounts, holding Keynes' reasoning that the origin of money is unit of account (1976 [1930]).
The second approach is the theory of credit money. The complementary currency systems were systems of 'pure credit' in which money circulated in networks of mutual liabilities with no intrinsic value to back it up. One of the versions of credit money theory is the monetary

circuit approach (Graziani, 2003; Realfonzo, 2006; Rochon and Rossi, 2003), that sustains that money enters a circuit when a firm contracts credit from a bank to launch production and create wealth, and leaves the circuit when the debt is repaid. In between, it sustains a chain of transactions with workers and suppliers, and takes the value of the production as extrinsic value. The monetary theory circuit provides elements to explain why around 2001 the complementary currency systems could perform the main functions of money, without any state regulation or back up, for up to 2.5 million participants in thousands of locations across the country. The organisers in the Argentine complementary currency systems took the role of issuers and bankers in the circuit while participants were the producers of wealth and together they framed a system of 'circulating debt', a concept coined by Schumpeter (2006 [1954]). The circuit approach also helps to understand why the system declined after 2004: there was insufficient production, overabundance of (fake) *créditos* and ineffective mechanisms to regulate the creditworthiness of the issuers.

The perspective of money as an institution adds to the explanation of why millions of participants used a currency of such weak characteristics. Institutions are embedded systems of rules 'out there' (Hodgson, 2006) that once in place acquire a life of their own and become self-enforcing. The Argentine community currencies were born out of mutual trust and later became accepted by convention and habit. They were notably effective in generating income by mediating trade and protected lifestyles during a severe economic crisis, substantiating the claim that money is not neutral but a 'force of production' and a 'transformative power', as hinted by Ingham (2002). Money structures and guides economic actions of users and commands production; it is far from neutral.

The Chartalist approach provides further elements to understand the emergence of the subnational currencies in 12 provinces around 2001. Chartalists contend that money is a token defined by the state to measure and collect taxes, so it serves the economy as well as a symbol of sovereignty. The provincial currencies became 'circulating debt' when a dozen governors resorted to the issuance of their own currency to defend their local economies and their sovereignty vis a vis the central state. Théret and Zanabria (2009) coined the concept of 'monetary federalism' to capture the phenomenon. The provincial states were part of the circuit of debt, and closed it by accepting the bonds as payment for taxes. The scheme was successful as a 'force of production' to reactivate some local economies but created chaos and hyperinflation in others. The critical difference between vice and virtue with the provincial bonds was to abide by the rule of issuing them in relation to the provincial capacities to collect taxes.

The interpretations enabled by the heterodox approaches to money offer some interesting policy implications in terms of monetary diversity. For example, it is possible to define the amount of money that can be issued in each of the currency circuits. Complementary currencies framed 'pure credit' economies in which the value of money depended firstly on the creditworthiness of the issuers and on the currencies becoming 'institutional facts' (Searle, (1995). The Argentine initiators were unable or incapable of complying with the rules of issuance and creditworthiness that they had defined. A system of mutual controls among issuers would be a necessary condition of sustainability of such a system. They also depended on the extrinsic value of the products in circulation and when these declined, the monetary circuits fell as well.

In relation to the provincial currencies the limit of issuance was defined by the capacity of the provincial governments to collect taxes, which are debts contracted with the state on which provincial currencies were issued. These observations are in line with Ingham's (2004) reflections that the relationship between spending, borrowing and taxation defines the quality and stability of state money and that creditworthiness is a key requirement to keep the flux of money running in pure credit economies.

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[i] The two NGOs were led by Horacio Covas, Carlos de Sanzo and Ruben Ravena