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The pervasiveness of monetary plurality in economic crisis and wars

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Abstract

The research shows a pervasive emergence of monetary plurality during episodes of social, economic and political demise. We draw on the concept of deep monetisation introduced by Lucassen and Zuijderduijn (2014) to follow how the established use of currencies enables economic actions to complete their daily transactions. Based on numismatic evidence, we briefly revise several episodes of deep economic demise to establish a links between socio-economic crisis and monetary plurality. In these periods the stronger and more established currencies disappeared and cash became scarce at the local level, particularly for transactions of smaller denomination. We subsequently focused on the emergency currencies of the two postwar periods in Europe, the hyperinflation, the Great Depression and the Spanish Civil war. We observed that in these periods of distress, the absence of means of payment of small denomination prevented the completion of daily transactions, hence improvised and unknown local money appeared as better than no money at all. We find that the emergency currencies were temporary solutions for the lack of small change at the local level while the contexts of socio-economic demise also provided windows of opportunity in the political sense for some activists' groups to pursue monetary experimentation and structural changes with a longer term horizon.

Keywords

Small change, emergency currencies, economic crisis, war, monetary experimentation, deep monetisation

1. Introduction: Currencies found and currencies made?

During periods of economic, social and political demise, empirical evidence shows a recurrent pattern of monetary plurality in the form of a currency that disappears from physical circulation but continues to exist as a unit of account, on the one hand, and currency created and circulated locally and with considerable improvisation to sustain a reasonable level of economic activity. Of course, not every crisis in the history of human kind has triggered the diversification of means of payment, but the link between chaotic socio-economic contexts and monetary plurality needs further scrutiny around the question of who creates means of payment and how a particular “thing” becomes acceptable as money. What is the relationship between money and crisis? To what extent is this connection indissoluble?

This article explores this relationship between socio-economic demise and monetary experimentation. Our motivation for this research relates to the incredible diversity of means of payment that we observed in numismatic findings, the actors that launch them, and the ways in which they started and ended. The currencies are probably as varied as the crisis that embedded these episodes of monetary plurality.

While we have not exhausted the many crises that have shadowed human history, we review a handful of cases in which the proliferation of complementary currencies emerged bottom upwards in contexts of severe distress. This article results from the collaboration with an artist and amateur numismatic that spent hundreds of hours doing archival work and analysing the artistic and symbolical features of currency. Moreover, it represents an effort to approach money from the material reality of currencies, as objects that structured the interactions of humans in chaotic periods even when their entire worlds seemed unstructured. We sought to connect the physical objects, namely local notes and means of payment, with the contexts in which they were issued and the agents that may have used them.

We propose that the emergence of means of payment during episodes of severe distress cannot be understood only as devices to solve temporary emergencies. Instead, we contend that they sometimes represent attempts to re-build the world and introduce changes that could live beyond the crisis, in line with the aspirations and ideals for a different future that become evident under severe distress. In other words, we have found that the emergence of means of payment at the local level is mostly the consequence of severe distress but in some cases these chaotic socio-economic backgrounds empower groups aiming at re-organising political, social and economic life in a different direction. They hence provide a ‘window of opportunity’ in a political sense (Kingdon 2003) for monetary experiments that propose long time-horizons.

We present monetary plurality as a temporary but ubiquitous solution in the context of war, hyperinflation and depression. We depart from the basic principle that any means of payment, however unknown, was better than no money at all. The implication is that socio-economic demise supported the exceptional dissemination of monetary innovations that in normal circumstances would attract just a faithful few. The need for means of payment triggered social experimentation with currencies at the local level and, most importantly, expanded their public acceptance and circulation. Some historical currency circuits reviewed in this article were extremely vulnerable in terms of their legality and acceptability, while others evolved within institutional sophistication and lasted in time. Our findings stand in line with the proposal that various currencies have always been unequally distributed (Lucassen and Zuijderduijn (2014).

2. Historical emergencies and money

The historical experience of the last century offers a broad variety of periods in which local or complementary currencies were used, normally in situations of economic collapse or financial scarcity (Kuroda, 2007, Schuldt, 1997, Greco, 2001). Complementary currencies are created contingently by communities in an effort to facilitate exchange and income generation based on local identity. Craig Muldrew (2013) emphasises the role of reputation as a source of power that enabled some actors to buy on credit or establish a certain thing they had as money for others.

A severe disruption of the national monetary system, however, disputes the notions of mere adaptation and complementation because in such cases actors may become bolder and dare into deep re-invention of money to re-establish a chain of payments or to protect local identity, or a combination of both. These are situations in which power relations are severely disrupted. Critical contexts weaken the limits between what is strictly allowed or tolerated by power holders and later nation states, on the one hand, and their sovereign monetary systems, on the other, and this disruption has sometimes allowed complementary currencies to emerge (Greco, 2001; Blanc, 2012). Economic agents turned to more accessible or more abundant monies to perform their transactions.

The tradition of monetary plurality has a long history, as evidenced by plenty of examples in which monetary plurality raised or resurged in episodes of severe crisis. In Medieval Europe, 'siege certificates' (Pick, 1978: 41) are one of the oldest surviving samples of 'emergency money' in modern Europe, and were issued by town hall councils in Europe as needed. During the siege of cities, metallic money supply was often impossible to sustain, so the local authorities along with municipal authorities of the city administration and, more frequently, the respective military commanders would issue siege certificates. Spanish siege certificates circulated as currency during the siege of the Spanish fortress of Granada's Alhambra by the Moors in 1483, for example. In 1574, Leyden (currently Leiden, The Netherlands) was besieged by the Spaniards, and coins were stamped on cardboard (the covers of Catholic Church books) instead of precious metal, which was unavailable, and thereby creating complementary paper 'siege money' embedded in the political sentiment of the event.

Note of the siege of Lyon, France (16th Century)

Note of the French Assignats after the French Revolution (18th Century)

Other examples of complementary currencies issued during conflicts other than sieges were in Spain by the Catalan villains during the war of the reapers (1640-1652), or the 'Billets de confiance' and Assignats issued in France after the French Revolution. There are also some surviving examples of notes issued during the French - German War of 1879-1871, Russian pieces printed on leather in Dorpat (1814, 1818 and 1831) and emergency money (Notgeld) issued in Austria (1848/49 and 1859 to 1869), Poland (1848-49 and 1860-1865), Germany (for instance, in Kaiserslauten in 1870/71). Italy (1866-1875) had such large amounts of emergency currencies that, according to Pick (1978), 'they are not completely catalogued'. They also existed in the Americas, for example in Brazil (1895-1896), where the communal and private emergency issues were meant to alleviate the shortage of small change. Pick (1978) maintains that there were up to 500 different Brazilian types of emergency currencies, some with positive interest rates. During the civil war in the United States, the Southern States issued the so-called 'Broken Bank Bills' (1861-1865), which were emergency currencies used in times of socio-economic demise. The issuance of complementary currencies in emergency situations was quite common and Pick's work (1978) shows us a myriad of similar examples of currencies during wars and other catastrophes.

With the development of the capitalist system, monetary transactions became more widespread and small change became accessible to the widest segments of the population in the process Lucassen (2014) denominates "deep monetisation". After the use of money included more segments of the population in the economy, paper money became more important, so gradually central banks were set up around the world. Central banks were one of the strongest institutions to pursue the unification of currencies per country in the 20th century. However, monetary plurality did not end with the dissemination of central banks and the uses of other currencies persisted.

Emergency currencies of small denomination were mostly fiat or paper money with no collateral, although some issuers were able to obtain metals and minted coins as backup. They were sometimes issued in the units of account of domestic, foreign or historical currency (for example Peseta Silver Certificates, Gold Mark, Gold Dollar) and sometimes in units of account that represented a claim on local goods such as grain, sugar, wood and other products depending on the region in which they were issued. At the same time, materials such as porcelain, cardboard, leather, pressed carbon, wood, velvet or linen were used as more durable substitutes than paper. In 1923, for example, the newly built aluminium mills in Teningen and Singen (Germany) issued emergency stamps from printed aluminium foil (Pick, 1967). These materials were sometimes used while metals and other reliable currencies were kept for hoarding and, hence, disappeared from the system.

In all the cases of social and economic emergencies described in this article, the mechanism of allocating the different functions of money to different currencies is recurrent, and confirms that the four inseparable functions that define money, at least in theory, have been repeatedly separated in practice. It would be too long to detail all complementary currencies that circulated during emergencies and research on many of these experiences is still pending. The examples given so far suffice to indicate that when societies face crisis and war, emergency currencies have been ubiquitous. They were easily accessible and available and were sometimes trusted even more than official money managed elsewhere by authorities that appeared too unstable or too remote from the alarming daily realities on the ground.

3. Emergency currencies after the World Wars

The two World Wars in the 20th century provided the crisis context for emergency monetary plurality. The terms emergency currencies, emergency script, crisis money, Notgeld (currency of need in German), municipal notes, emergency script, military and obsidional coins and paper money (in besieged locations) denote that these are temporary currencies that circulate during a social, political and economic demise. In general, emergency currencies take the functions of national currencies temporarily. Small denomination means of payment became particularly scarce and non-existent in some areas. In the First World War, we can find large amounts of emergency currencies of small denomination in Germany (1914-1923) and Austria (1914-1921), and in smaller amounts during the civil war in Mexico (1913-1915). Pick (1978) has documented approximately 120 Dutch emergency notes from the First World War that may have inspired other countries to issue small amounts of emergency money, including Finland, Luxembourg, Italy, Montenegro, Rumania, Sweden, Turkey and Hungary. During the Second World War, emergency currencies were strictly forbidden in all occupied territories by the German troops, and only some extremely rare Dutch, Norwegian, Polish and Yugoslavian notes can be found (Pick, 1978).

The authority of the central issuers of money was also seriously undermined. After the First World War, several localities and private issuers in Germany, Switzerland and Austria coined emergency currencies to ameliorate the effects of the economic crisis caused by the conflict and hyperinflation, although they were never formally authorised by the government or the national banks. During the conflict, the central empires had issued great amounts of paper money without collateral in bullion to cover the costs of the war, which was a cause of the hyperinflation. Municipal authorities decided to promote bartering in small localities to facilitate trade, and some gradually issued vouchers that could be used as means of payment. They had a fixed face value in regular money and they were meant to replace within their localities the hyperinflationary national notes that were not performing the function as means of payment. The local alternative notes became known as Notgeld, and circulated in low amounts within restricted geographical areas. Most of the metals normally used for minting, such as silver, bronze, and copper were required in the war effort, so coins went missing. Moreover, people kept these metals as reserve of value, which aggravated the availability of of currency of smaller denominations.

While some emergency currencies were simple papers that circulated as fractionary means of payment, other notes had colourful and elaborate designs in an effort to increase the appeal and acceptability of these currencies. Some included expiry dates, details of the territory in which they were valid or the types of payments for which they were acceptable, such as public utilities. The emergency currencies were guaranteed by the local governments or the local savings banks, so their circulation was restricted to the city where they were issued. Many of these notes, in fact, bear the warning that they are only valid within the limits of the district and for transactions with the local government.

The post-war economic demise severely affected businesses. Several retailers and industries also issued their own emergency currencies that circulated as internal means of payment within a particular sector or client network. The notes were guaranteed by their own capital funds, in a context in which regular money was scarce and lost value rapidly due to hyperinflation (Diessner, 2012). Commercial banks issued low denomination notes, too.

As hyperinflation in Germany worsened, an unthinkable proliferation of complementary currencies followed. Although such currencies were tolerated, they were not formally authorised by the central banks. They circulated because the public accepted them in practice despite their lack of formal legality. The papers multiplied not only in number but in purpose and coverage as well. The denominations of the emergency currency notes increased and passed the hundred, thousand, million and eventually billion marks. At the same time, the quality of the scrip paper decreased in order to save on its production costs. In the beginning of 1923, hyperinflation in Germany was out of control and some emergency notes abandoned the mark as unit of account. They were denominated instead in specific goods such as a certain amount of wheat, barley, wood, sugar, or coal; these were called Wertbeständige in German, which translates as ‘fix value notes’.

Goldmark Freistaat Preussen 1,05 =1/Dollar USA

The emergency currencies were generally conceived as surrogates for the regular money for a temporary period. Towards the end of 1923, inflation was curbed and a new national currency was introduced, so the usage of emergency currencies was gradually abandoned or the public stopped accepting them. Diessner (2012) estimated that emergency currencies were definitely withdrawn by 1924. Notgeld was associated with hunger and calamity, and these notes were not popular among the general public. Eventually they were left as toys for children to play because they had no real value. Others were burnt by the thousands, as colourful but worthless paper. Notgeld was precisely what its literal translation indicates: it is the money of an emergency situation. It appeared in a vacuum of monetary regulation in which local agents resorted to extraordinary measures to support their daily livelihoods and the local economy, until the economic and social system would recover. Today, however, Notgeld has gained both commercial and academic interest, since the demand of local paper money has increased enormously not only by collectors and for academic research, but also by curators who purchase them for museums worldwide.

Notgeld could, of course, also be military money, for example, the sadly famous Concentration Camp Notes (Lagergeld), and the post First and Second World War banknotes. Pick (1978) mentions issues in Germany, France, Japan and Austria. For example, the ones of the Allied forces in Germany (Aliierte Militärbehörde 1945-48), which were put into circulation by the allied military authorities of the occupied territories for the civil populations. They were made by the USA in collaboration with private printing houses like Forbes Boston and the Bureau of Engraving and Printing

Allied Military bond

The 20th century offers an enormous amount of complementary emergency currencies and other vast amounts of forms of money such as International Military Payment Certificates, Obsidional and Military Banknotes, Banker´s Drafts, Liberty Bonds, Exchequers in the UK or US Treasury Bonds, and the Schatzanweisungen (in German), known also as War Bonds (Kriegsanleihen), which still have to be classified. As in Germany, emergency currencies were prohibited in countries like Holland by the occupying troops; Pick (1978) mentions around 500 different Dutch ones, which 'were withdrawn and are extremely rare today'. We can find similar amounts of emergency currencies in Norway issued from April to October 1940, as well as in Poland and Yugoslavia. The merchants in Denmark avoided the prohibition issuing notes called 'Frimaerkepenge which were small printed cartons', according to Pick (ibid) A stamp had to be adhered just like on the so called Spanish 'Sello Moneda'(1936-1939). Miró Agulló (2008) classifies 114 different Spanish ones.

Apart from these emergency currencies, there were other international paper monies issued and it may be difficult to clearly determine which of these could be considered emergency currencies. Pick (1978) also notes that after 1911 a vast amount of banknotes of communal and military origin circulated in China. After the war was declared by Japan, Americans were forced to leave the Philippines and as often happens in times of war, they took with them large amounts of cash, so the population was forced to issue emergency currencies to maintain all payment transactions. Following a quote by Pick (1978), we have found a rare catalogue by Neil Shafer (1974), 'Philippine emergency and guerrilla currency of World War II', in which Shafer stated that, 'as a result of the war, in 1941 currency from the United States for the Philippines has basically disappeared. The Philippines was a U.S. territorial possession. In dire need for a circulating currency, Philippines President Quezon the establishment of emergency currency boards in the provinces to print notes, with most of the currency being produced while the Philippines was under Japanese occupation. These notes served as tangible symbols of resistance and eventual victory. They were really necessary as a currency and most were legally issued by the currency boards. Yet, there were perils in circulating the notes, as the Japanese sometimes tortured and killed those caught with such notes in their possession.'

Mindanao Emergency Currency Board (USA)

After the Second World War (1945-1955), and as a consequence of political as well as economic developments, many more countries issued emergency currencies. Pick (1978) mentions Indonesia, Israel, Italy and Hungary. The banknotes of Italian Banks from 1975/76

(Assegni Circolari and Assegni Bancarie) circulate still today and show that even in current times emergency currencies circulate.

Military payment certificate

Other forms of military and emergency currencies and coupons are still operated worldwide in military camps of deployed armies. Private companies supply paper money and local people are recruited as labour. For example, Bosnians working in the PX in EUFOR (European Union Force) military camps in Bosnia-Herzegovina. In our research, we have found military payment certificates, phone cards, credit products, as well as gift cards, food coupons and web based exchange. Perhaps the most famous of them is the military star exchange and clearance outlet, where we can also find petrol, tobacco and alcohol among other army and air force products, food coupons and exchange services for the United States Department of Defence organisation, that operates the retail stores at U.S. Army and U.S. Air Force bases and posts all over the world.

4. Depreciating currencies in Europe during the Depression

During the inter-war period, the emergency situation lasted longer than the term 'emergency' would suggest. The German government eventually managed to get hyperinflation under control in 1923 and withdrew most of the local emergency currencies, but the Great Depression hit the country a few years later and the economy collapsed again in the 1930s. The ideas of the Argentine – German economist Silvio Gesell attracted the attention of a number of intellectuals as they searched for alternative explanations and solutions to the extraordinary economic demise. In relation to monetary innovation, in a posthumously published book, Gesell (1958) developed the principle that money should be exposed to depreciation to discourage hoarding and what he considered non-productive generation of income.

The concept of money that loses its value along time has been known in French as demurrage, in German as Schwund- or Schrumpfgeld and in English as shrinking or depreciating money. The application of a negative interest rate, as Keynes (1976/1930) later called it, represented a penalty on its hoarding. In other words, if people decided to retain the currency instead of using it for subsequent payments, they would suffer a loss of value equal to a negative interest rate and eventually the complete loss of its value on the date announced on the scrip itself. The intention behind the principle of shrinking money is to increase its circulation velocity to feed the chain of payments of goods and services, in order to stimulate production and exchange in the local economy. The idea of depreciating money was that the currency runs to the next transaction. This type of money is at odds with saving but during the Depression the priority of economic agents was to be enable consumption and, as a result, production and employment. Gesell conceived depreciation of money as a means to discourage its hoarding outside the circular flow of goods and services. He was convinced that one of the main causes of economic crises was the withdrawal of money from the economic circuit due to speculation or what John Maynard Keynes would later refer to the problem of ‘liquidity preference’. Gesell believed that people would be pressed to spend shrinking money as means of payment because if they hoarded it, they would have to pay for its depreciation.

The French economist Pierre-Joseph Proudhon (1840) made a somewhat different argument a few decades earlier. Proudhon objected that products like meat, fish or fruit perish in time, while currency does not. The difference in perishability between food and money, Proudhon argued, gave money holders an ‘unfair’ advantage over producers of food, and this difference leads to exploitation because producers may be obliged to reduce the prices of their perishable goods in order to obtain money that maintained its value through time.

Fischer (1934) attributed the concept of shrinking money to Gesell and investigated its early experimentation around the time Gesell died in 1936. Two friends of his, Hans Timm and Helmut Rödiger, decided to implement the system in Erfurt, Germany, in October 1929 and launched the Wära Exchange Society, a name that combines the German word for ‘commodity’ (ware) and 'durable' or 'resistant', also used as 'unit of value’ (Währung). The Wära Exchange Society expanded across the country and after a while it had offices in all the main cities including Berlin, Bonn, Hamburg, and Cologne. The society issued vouchers to be used as means of payment among the members of the exchange group (Tauschgesellschaft) and the currency included the names of its directors, Timm and Rödiger, as responsible signatories of the notes (Lindman, 2011). At the back, the vouchers had a table with 24 spaces where users were required to stick a stamp at the beginning of each fortnight. Keeping the scrip at the end of the fortnight meant having to add a stamp, so hoarding it worked as a penalty on the person that prevented the voucher from ‘running to the next transaction’, and at the same time it worked as an incentive to keep money demand at the minimum. Stamps costed 0.5 percent of the value of the voucher, so the notes would depreciate at a rate of twelve percent a year. If members failed to pay the stamp, the vouchers were simply not accepted in exchange for goods and services. The Wära vouchers were redeemable for Reichsmarks at any time, but with a charge of two percent of the value. This implied that the group had to keep a permanent reserve fund of Reichsmarks to face claims, but it increased the stability of the vouchers.

By 1931 the Wära were accepted in about a thousand shops and small businesses across the county. Members included, for example, dairy producers, bakeries, print shops, barbers, small restaurants and shops selling furniture, flowers, books and bikes. Joining the society may not have been their first choice, but they were persuaded by the scarcity of the national money. They gradually formed an economic circuit in which money would flow along the circuit rapidly, including workers that received the vouchers as partial payment for their work. While the notes served the purpose of facilitating local production and trade, the Wära notes were never endorsed by the Central Bank of Germany, like it had happened before with the post-war local emergency currencies.

The experiment with the Wära got significant public attention in relation to the economic recovery of Schwanenkirchen, a small town in Bayern (Schuldt, 1997). A mining engineer bought the local bankrupt coal mine in an auction and found it impossible to raise the working capital to set it to work again. He then contacted the Wära Society which lent him 50,000 units of complementary currency. The engineer hired 60 workers willing to accept the complementary currency for up to 90 percent of their wages. Local shops were reluctant at first to accept the rather unknown currency but eventually they consented because they were severely affected by the recession at the time – local money was better than no money at all, they reasoned. Their suppliers and producers accepted them too, and eventually the vouchers circulated back to the engineer and coal mine owner in exchange for coal. The circuit was hence completed. All members tried to buy goods with the Wära as quickly as possible in order to avoid paying the stamp for the scrip.

Werner Onken (1983:68, quoted in Schuldt, 1997:36) described Schwanenkirchen as an ‘island of prosperity in the Bavarian woods’. The monetary innovation and a full account of the Wära appeared in several national newspapers. The idea of shrinking money was not well known at that time and few people actually understood it well. It ran contrary to the deflationary policies that the government implemented to curb hyperinflation (Cohrssen, 1932). Irving Fischer claimed that 20,000 Wära circulated in Germany between 1930 and 1931 and 2.5 million members used them, which the author considered rather exaggerated (Fischer, 1934:22). However, not everyone was so positive about the Wära and in October 1931, the Central Bank prohibited the issuance and circulation of any means of payment that were not the official ones, on the argument that these complementary currencies would cause inflation. In accordance with the new regulation, the Wära scrip stopped circulating immediately, the coal mine closed and Schwanenkirchen fell back into recession.

Experimentation with money, however, did not end with the prohibition of the German Central Bank. The Depression did not end and other villages were ready to design similar bottom-up monetary institutions in an attempt to recover their local economies. The owner of the coal mine in Schwanenkirchen had a fluent correspondence with a friend in Austria, who became the major of the village of Wörgl, Austria, and started another experiment with a complementary currency. In 1932, the mayor of the Austrian town of Wörgl, Michael Unterguggenberger, was inspired by the Wära and decided to use it in a modified way: a public works programme funded by complementary currency. Unterguggenberger observed that with the Depression, local unemployment was soaring and the municipality was almost bankrupt and heavily indebted to a bank in Innsbruck. With the support of the constituency and the local council, the major of Wörgl launched a plan of public works that was financed with the complementary currency issued by the local government.

The currency, circulated as scrip and a stamp of one percent of the value of the voucher, had to be paid at the beginning of each month. The aim of the stamp was to encourage users to spend them rapidly instead of storing them, following the idea of the circular flow. The Wörgl money was also redeemable for the official schillings at a discount of two percent. Public servants received half of their wages in complementary currency which was later increased to 75 percent. Shops and local firms accepted it because they believed it increased their turnover (von Muralt, 1934) and the city government also received them as payment for local taxes. Businesses were naturally not thrilled at the prospect of losing 1 percent of their income at the end of the month or 2 percent if they wanted to redeem it for official money, but the emergency money was better than facing the Depression. Von Muralt (1934: 51) reports that businesses were appreciative of the scheme in the context they were facing in 1932.

With the plan, the financial situation of the local government in Wörgl recovered significantly as income generation through taxation increased with the depreciation of the currency and the payment of arrears was allowed with the complementary currency because the inhabitants became eager to get rid of the complementary currency by paying taxes. Unemployment fell at the same time while it was increasing in the rest of Austria; more inhabitants accepted getting part of their wages in complementary currency. Their labour was used to improve local infrastructure, such as the sewage system.

The notes carried a 1932 Wörgl 'manifesto' written in its back side, significantly titled 'An Alle' (to all, in German). The translation of the text in the notes reads as follows, 'Slowly circulating money has caused unprecedented needs among millions of workers around the world. The end of the economy has begun. It is time to act with determination and prevent wreckage, so the economy can be saved and humanity can avoid brutal conflicts and wars. Humanity lives on the exchange of goods and services. Sluggishness in the circulation of money hinders such trade, causing millions of persons of working age to lose their jobs and their livelihoods. Circulation must be re-established to safeguard the livelihood of humanity. That is the aim of the currency of the market town of Wörgl. It reduces need, supports work and gives bread!' (punctuation marks in original; translation by the authors).

´Free money' note with stamps

Several towns in the region around Wörgl, such as Kirchbichel, imitated the experiment or expressed their intentions to follow. The complementary currencies of Wörgl and Kirchbichel were accepted on equal terms in both towns, with the aim of increasing the economic impact. The schemes attracted considerable international interest, including Irving Fischer's,, as will be explained in the next section. There were many objections to the replication of the scheme across Tyrol and a number of issues to reflect on, such as the increase in risk for retailers accepting the stamp script for their sales while having to pay for supplies in regular currency. The scheme also met strong opposition from the Central Bank of Austria, which feared that it would lose control over the national monetary system if complementary currencies grew. The bank subsequently prohibited the issuance and circulation of any currency in Austria, other than its own.

The kind of monetary innovation of the Wära Society across Germany and in Wörgl in Austria speaks of different intentions and aspirations to those that sustained the Notgeld or emergency money after the post First World War period. While the Notgeld appeared as an extraordinary and temporary measure in the context of demise of the socio-economic system after a major war, the experiments with shrinking money stem from a desire to implement and further develop the theoretical elaborations of Gesell and a number of idealists that believed in reforming the monetary and economic system by practicing them. In these last cases, the social actors implemented a scheme at the collective local level that entailed a process of joint reflection and setting of rules within their networks or localities. Examples of these include the decisions on the amount of interest towards depreciation, the ways to communicate them to outsiders, the agreements on the percentages of the wages that would be accepted, and so on. In that sense, the shrinking money experiments are expressions of efforts to institutionalise solutions at the local level that involve a large number of agreements, negotiations, rules and mechanisms to enforce them. It seems the aim was to reform the monetary system beyond the duration of the crisis, although that context was used as a window of political opportunity (Kingdon, 2003; Tarrow, 1998).

Free money in 1933

5. Stamp scrip in USA during the Depression

The American economist, Irving Fischer, knew of the experiment in Wörgl and actually asked one of his collaborators in Geneva to visit the town and gather information on the scheme at the site (von Muralt, 1934). Irving Fisher referred to those first experiences as 'stamp scrip' because currency notes were stamped and each stamp reduced its value as time went by (Fisher, 1933, Fisher, 1934). Gatch (2009) claims that the use of stamping for savings was relatively familiar to Americans and offers the examples of the Liberty Bond subscriptions in the First World War and savings cards.

Stamp scrip was first introduced in the USA by a Dutch follower of Gesell, Charles Zylstra, in the small town of Hawarden, Iowa. Due to the Depression and the decrease of means of payment, the general public preferred to keep the currency they could access as reserve of value. The result was the scarcity of means of payment to support the exchange of daily necessities. With the support of the local chamber of commerce, Zylstra convinced the city council of Hawarden to issue complementary currency to finance public works in October of 1932. The model of complementary currency chosen was that of stamp scrip with depreciation, applied through a stamp per transaction. Each time a one-dollar-voucher was used, the buyer had to stick a stamp of three cents as a kind of ‘sales tax’. The stamps were on sale in the city hall and the revenues of their sale constituted a reserve fund in dollars with which the issuers guaranteed the convertibility of the local currency into the official national dollars. Each voucher could be used up to 36 times after which the last user could claim one dollar in official money. The remaining eight cents financed the administrative costs of the scheme.

The experience in Hawarden was described in an article in the New York Herald Tribune titled, ‘Stamped Money called success in Iowa Town’, published on 15 January, 1933 (cited in Schuldt, 1997:46). According to that source, businesses saw an increase of 50 percent in their revenues, which was partly explained by the fact that the smallest note was of one dollar, so clients could not buy anything of a lower value and preferred to increase their consumption instead of keeping the currency. The currency was used to partially cover the labour to build a local road.

At that time, Fisher had a young German assistant, Hans Cohrssen, who had written about the Wära, and together they worked on the implementation and dissemination of the stamp scrip (Fisher, 1933). Fisher visited Hawarden shortly after the experiment began and his endorsement attracted attention of other cities across the country (Gatch, 2009: 129). The Hawarden experiment was later imitated by other cities across several states. The maximum amount of exchanges and the value of the stamps varied, as was their taxation. The issuers were not always the local governments but also local chambers of commerce (as in Evanston, Illinois) and churches (as in Sioux City). A renowned case was the Larkin & Co. in Buffalo, New York, a retail store chain that issued 36,000 dollars of Larkin Merchandise bonds. It used the vouchers to partially pay the wages to its employees and accepted them in any of its stores. Other businesses and clients gradually started to accept them too. When the shortage of regular dollars eased, Larkin slowly withdrew the scrip from circulation. The original 36,000 dollars circulated back as payments worth 250,000 dollars of extra sales.

Fisher criticised the Hawarden depreciation mechanism based on transactions instead of one based on the course of time on grounds that it misses the goal of discouraging the storage of money: ‘It costs three cents to transfer the scrip instead of costing three cents not to transfer it’ (Fischer, 1934: 31). He also warned that using a stamp each time the note changed hands invited opportunistic behaviour because there was no way to check that the stamp was either bought or stuck as required. Fisher hence advised against the stamp mechanisms of depreciating the currency per transaction and favoured the dated system. He concluded that, ‘from a correspondence with four or five hundred communities in every state of the Union, and from other sources of information, I gather that there is now a definite turn toward the Wörgl or dated type of Stamp Scrimp’ (1934: 41).

Whether these critiques proved problematic in practice or were they Fisher’s own elaboration is unknown. Still, stamp scrip became widespread across the country, as Fisher's correspondence seemed to suggest. Other sources estimated that one million people, almost one percent of the U.S. population at that time, depended on the 200 to 400 self-help and barter groups that existed in the United States from 1930 to 1936. Eventually, Fisher (1934: 163) proposed a ‘nation-wide application of Stamp Scrip - still in quantities as small, proportionately to the size of the nation, as it is in the localities now using it; and still to function only as an emergency supply -substituting for other circulation which has deserted-withdrawing when the deserter returns to service’, in reference to regular money. As in post-war and hyperinflationary Germany, the United States also witnessed an unthinkable proliferation of complementary currencies during the Great Depression.

Providence Stamp Scrip

Initially, the U.S. government did not take measures for or against stamp scrip, probably believing that stamp scrip was a creature of the crisis that would fade as employment recovered. Gatch (2009) further reports a wide number of practical problems that undermined the reality in which stamp scrip was supposed to work, such as shirking in the use of stamps, slow circulation, and refusals to accept the currency. Some sources state that no fewer than half a million families were active in 600 organisations by the end of 1938, but were replaced as co-operatives and companies settled payments among private individuals using accounts in 'points' or 'certificates' as means of payment, instead of scrip, because those mechanisms apparently worked better. Moreover, in March 1933, President Franklin Roosevelt banned further scrip issue on grounds that the national government was losing control of the monetary system. The subsequent abandonment of the golden standard gave the country the opportunity to implement a monetary policy that would further support economic recovery. Fisher stopped promoting the idea after 1934, Zylstra moved away from Hawarden, and only Cohrssen continued to advocate Gesell's idea of demurrage.

Stamp scrip, in general, came to be seen as an instrument of economic rehabilitation, creatures of an emergency situation with minimal chances of surviving in better times. In the short run, they helped their members survive the Great Depression but did not constitute a durable solution because it did not support an autonomous flow of currency to support a circuit of exchange. The stamp scrip was dependent on regular money to afford many supplies and was plagued with problems of low managerial capacity and poor accountancy in the exchange systems. In addition, there is no indication that any of its proponents actually conceived of shrinking currencies as part of a trajectory to restructure economic relations after the crisis. That is, as an institution beyond the contingency of a temporary economic demise. As Fisher presented it, complementary currencies were an appropriate mechanism to support livelihoods and incomes in specific circumstances and 'until the deserter comes back to service', in reference to regular money.

6. Municipal Emergency Currencies in the Spanish Civil War

Spain had an enormous diversity and amount of local notes and currencies of all types and functions during the Civil War. Moreover, before the war started each Spanish town hall had its own currency or was planning to have a local complementary currency. In general, they are barely studied and many hours of archival work fed partial publications (von Prittwitz, 2014) that allowed us to identify monetary forms as varied as currencies with negative interest rates, vouchers issued specifically for social aid, refugees and victims of the heavy bombardments, Catalonian co-operative notes, military money, commercial money and obsidional currencies of many kinds around the time of the Spanish Civil War.

Paper money was virtually unknown in Spain until the middle of the 1800s and the first note issued by the Bank of Spain appeared in 1874. It was meant as reserve of value, so its denomination of 25 pesetas was high in relation to the prices of common necessities. Daily transactions were traded with metallic coins of smaller values. During the first decades of the 20th century, the denominations of the notes decreased to amounts required for their daily use as medium of exchange (Tortella Casares, 2008). The use of paper money of smaller denominations expanded slowly and was not yet completely widespread when the Spanish crown fell in 1931. In the politically unstable months until the beginning of the Spanish Civil War in 1936, the Spanish metal coins gradually disappeared from circulation because they were kept in hoards as reserve of value in anticipation of worse times. Gresham's law was verified and the 'good' currency would stop circulating. These re-appeared very slowly and the notes and coins issued by Alfonso XII were still circulating at the end of the war in 1939.

In a nutshell, the war unleashed after the partial failure of a coup on July 17 and 18, 1936. The parties that faced the conflict were denominated republican, on one side, and rebellious or national, on the other. The republican side was led by the Spanish Popular Front based out of the Government of Spain that was elected democratically before Franco took over the government. It is estimated that Franco's armed forces were composed during the war by almost one million men, including the Falanges, an extreme nationalist political group influenced by Italian fascism. The Falanges issued a manifesto of 27 points repudiating the republican constitution, party politics, capitalism, Marxism, and clericalism, and proclaiming the necessity for a national-corporatist state, strong government and military, and Spanish Imperialist expansion. On the opposite side was the Popular Front. In the background of a Soviet policy shift in the mid-1930s, European Communist parties joined Socialist, liberal, and moderate parties in popular fronts against Fascism. In Spain, the Popular Front was an electoral coalition formed in January, 1936 by the main parties of the Spanish Left. On 16 February, 1936 the Popular Front managed to win the last elections during the Second Republic and was followed by a coup that would lead to the Spanish Civil War. A coalition of working-class and middle social strata united for the defence of the democratic government against the forced Franquist government. The war was driven by social, political, religious and military considerations that eventually caused an unprecedented economic collapse. It ended on 1 April, 1939 when Francisco Franco declared his victory and established a dictatorship that lasted until his death in 1975.

As it occurred during other episodes of economic demise, the Civil War in Spain enabled the proliferation of local complementary currencies or 'municipal notes'. During the conflict there were two 'official' currencies as complements to the traditional Spanish Peseta: The republican and the national peseta, even though only the republican peseta could claim officialdom since it was the democratically elected government during the Second Spanish Republic. For example, there were a total of six different types of notes of five and ten pesetas, issued by the Bank of Spain in Burgos, the Bank of Spain in Madrid, vouchers of its subsidiaries in Gijon, Santander and Bilbao, and treasury bills launched by the Catalonian and Asturian governments that claimed economic independence during the conflict. The Bank of Spain was officially resettled in Burgos in September 1936, after a period in which its subsidiaries opened and operated under the commands of the various groups that ruled the country (Sanchez Asiaín, 2013). It started issuing paper money again but the gold and silver reserves, if there were any left, were kept in vaults in Madrid, so the newly issued currency lacked collateral. Moreover, the Bank of Spain in Burgos over-stamped notes issued before the conflict, in order to reassure that those bills were valid as means of payment. In reality, only silver and other metal coins were accepted across the entire country during the war but the public tried to keep metal coins as reserve of value, which subsequently dried out the system of means of payment.

Catalonyan Peseta

Municipal notes appeared around 1936 and had a relatively stable value, although they were temporary, local, and restricted to specific areas and uses. Approximately 2,000 localities issued about 20,000 notes of various denominations and duration. There are currencies issued by municipal authorities that could still claim legitimacy during the conflict, along with others issued by the fighting armies, rural co-operatives, and local businesses, which were intended mainly to enable the trade of food and agricultural products during the conflict. Some of the city councils were aware that they were introducing a new monetary form and searched for a new name for their currency. Their concern with socio-economic aspects of money was so great that they avoided the words 'money', 'banknote' or denominations of the units of account such as the Peseta. They introduced denominations like degrees and units. Other municipal currencies avoided religious connotations and issued notes that eradicated the existing religious symbolism.

The Popular Front also created a number of complementary currencies for different purposes, mainly in defence of their local municipal finances and social-economy organisations. In many cases these currency notes and coins carried the motto of the republic: peace and work. The currencies related the value of labour to products, wages and other payments made with them within the territories of the municipalities and in mandatory admission for all transactions. Social aid for refugees, the unemployed, and the poor, contributed to palliate the negative effects of the war. Some banknotes were coined for the only reason to help refugees and the civil populations while other banknotes were made solely for the victims of bombardments. As the war lasted longer than initially expected, it originated a great variety of complementary currencies during the period (1936 -1939) and their exact origin is difficult to establish. It was not always clear to which of the two governments each currency corresponded. Although they all bore the nominal value of the 'Spanish peseta' some would be labelled with added stamps or superscripts of the nationalists or the republican parties respectively. Each army considered that the currencies issued by the adversary were the 'money of the enemy', and its use would be punished even with death.

Pesetas of Gijon

Small change to pay for daily necessities was equally scarce, as it had happened in Germany during the post First World War period, so vouchers kept multiplying and were circulated at the same time as the municipal currencies. The vouchers that were issued as small denomination currency were called 'fractionary' in relation to other notes. The list of issuers included the many groups that participated in the conflict, such as communists, socialists, trade union fighters, anarchists, republicans, fascists, and the international brigades. These vouchers were sometimes handwritten papers given by a local bakery. There were also handwritten notes stating that a fighting group in either army received a product, usually food, on a certain date and place and promised to pay back the appropriate amount at the end of the conflict. These also circulated as means of payment. Some notes even skipped mentioning the value, which was basically unknown in the middle of the conflict, and mentioned only the date when the goods changed hands, the recipient and the products given, in the assumption that these would be redeemed at whatever prices resulted for those products when the war ended. The name of the issuer and the organisation he or she served was also mentioned, which gave the vouchers some legality. Many of the notes subsequently circulated as currency within the area, reflecting the fact that any means of payment were perceived as better than none at all, and that complementary currencies could be handwritten small papers, made in situ and accepted in trade in the demise of the entire political, economic and social system.

Different pesetas, some censored

In the proliferation of notes, there were some depreciating currencies as well. The notes of the Constitutional City of Montoro were perhaps the first depreciating money in Spain. In August 1936, the local council printed a series of bills of five pesetas with a depreciation table at the back in which the value of the bill was decreasing weekly. A bill was worth five pesetas on 24th August, for example, but 4.50 on 2nd November. After twelve weeks, the bill was partially redeemable only in the town hall. The municipality paid civil servants their wages with this shrinking currency and workers tried to spend them immediately to pay for their immediate needs, or deposited them in local banks as soon as possible. A monthly wage for a municipal employee was about 20 pesetas, so a note of five pesetas represented a significant amount of money for a municipal employee in 1936. After seven days the currency would start losing value, so the instrument was aimed at speeding circulation and cash deposits in the banks, which were subsequently able to offer credit for production. It was not possible to establish a direct link between the Spanish shrinking currencies and Gesell's ideas, but considering the large number of anarchists and brigadists from Germany fighting in Spain, it is possible that the Spanish municipal banknotes could have been inspired by the German experiences. It is possible that the council of Montoro would have heard of the cases of Wära and Wörgl and aimed at promoting local trade and production using a similar mechanism. This type of monetary experimentation also took place in other locations in Spain, such as the Andalusian villages of Porcuna and others ruled by the Popular Front in the province of Córdoba, where depreciating municipal currencies were introduced in 1936 and 1937.

Emergency scrip with demurrage in Montoro, Spain

It is impossible to verify how many notes were issued and on what date they stopped circulating but a large collection is available on our website[1] and in Von Prittwitz (2014), Schwundgeld Español. The proliferation of municipal currencies followed the multiplication of individual and municipal responses to the ineffectiveness of the monetary authorities to alleviate the shortage of means of payment during the war, the fact that the population would keep gold and silver coins as reserve of value, and of course the war propaganda of numerous political fractions. At the end of the conflict, Franco's government decreed that all the municipal currencies issued by the winning national army could be exchanged at the Bank of Spain for the new Spanish currency (Order 5, Decree 27 August, 1938 published on 17 September, 1938).The republican money was confiscated and repudiated, and municipal coins and local banknotes were repudiated. Franco's government created a new version of the Peseta, the 'Peseta of the Spanish State', that circulated between 1937 and 1975). However, many complementary currencies continued to circulate among the population as medium of exchange in periods after the Spanish Civil War (1939-1949) and later in the Second World War (1945-1955), even if they were prohibited. Some notes were kept in secret and are still found today among collectors.

Many Spanish complementary currencies are unknown, perhaps due to the militarist oppression that followed in Spain for almost 40 years and its severe control of institutional and municipal authorities. The Second Republic basically closed the window of political opportunity that sustained monetary experimentation with the Popular Front and around the period of the conflict. Before the Civil War there were a large number of municipalities that reclaimed their right to issue money that related its value to labour and the reproduction of labour. Those complementary currencies derived from local aspirations to restructure the socio-economic system and to gain independence from the central bank and other monetary authorities. In comparison, the proliferation of municipal complementary currencies during the war sprang

[1]www.billetesmunicipales.com

from the need to provide means of payment to distressed local economies, although even in those circumstances some groups and municipalities continued the monetary experimentation and issued depreciating currencies, for instance.

7. Conclusions

The post First World War period in the German speaking countries in the 1920s, the Depression in Central Europe and in the United States in the 1930s, and the Spanish Civil War in the late 1930s, have severe social and economic crisis in common. While sharply different in terms of causes, geography, duration and other characteristics, all four were episodes in which institutions broke down. The social structures that regulate how agents interact with each other collapsed, together with the notions of what is socially acceptable and what is not. The institutions of money were not an exception, as they ceased to be and do what is expected of them. So, who makes money? The variety of places and actors that started complementary currency systems are as broad as the crises that embedded them and the aims they pursued. We tend to find that the agents on the ground such as municipal governments, citizens' organisations and business associations that ventured into issuing complementary currencies to resolve immediate emergencies.

First and foremost, complementary currencies appeared as devices to resolve the needs for money in the local economies. In all four cases, there was evidence of hoarding metal bullion and other currencies perceived as more reliable. The retention of money as reserve of value quickly affected the availability of means of payment to perform trade. Stringent monetary policies to curb inflation and the need to use the metals for the war effort further dried the circulation of money. Demand rose significantly for small denomination notes that are most commonly used in daily transactions and by low income segments of the population. The function of money as means of payment hence collapsed, and the local solution of complementary currencies emerged as punctual, small scale and temporary for daily transactions. Complementary currencies apparently emerge first to fill in the gaps left by the regular monetary system in terms of smaller denomination notes, implying that local complementary currency systems are essentially low-denomination currencies. However, this proposition would require further research.

The sequence in these cases suggests that the four key functions of money do not necessarily fail at the same time. The function of unit of account apparently collapsed last, and complementary currencies indicated their value in the established unit of account (marks, pesetas, dollars, etc.). Only in the most extreme cases of the Spanish Civil War some of notes referred to essential goods and did not include a fixed value in a monetary unit of account; the local goods that sustained the reproduction of labour or the labour born to obtain the voucher were used as unit of account to value those notes. The sequence in which monetary plurality emerged and replaced the functions of money suggests that the role as unit of account is the ultimate or most essential function of money. In a discussion on John Maynard Keynes' Treatise of Money (1930/1976), Geoffrey Ingham (2004) identifies the unit of account as the primary and most basic function. In the cases referred to in this article, the replacement of an official unit of account for a local unit of account rarely happened. When it did, and if the monetary authorities had some capacity to react, the replacement of the unit of account at the local level was interpreted as a serious contestation to monetary sovereignty. At the same time, the issuers of the local currencies conceived their new units of account as the foundations to build a different socio-economic system that would free them from the central monetary authority.

While the widespread dissemination of complementary currencies can be seen as the result of the chaos that prevailed during hyperinflation and war, their origins were bottom-up efforts to recover economic order, or at least some sense of normality. The creation of local money centres on organising exchanges, and can be analysed as an attempt to re-configure institutions to sustain circulation and production when these are interrupted. Agents identify the need for tools of economic organisation and engage in the creation of institutions - monetary forms- that would perform that role. The background of chaos supports the emergence and acceptance of complementary currencies among groups that would normally not be open to such experimentation because weak money is perceived as a superior solution than no money. In political terms, the demise provided a window of opportunity to experiment and promote the restructuring of the social and economic system, although to different extents in the four cases. Experimentation with money has the political connotation of challenging the prevalent economic system that regular money serves. In post-war Germany and Austria, depreciating currencies were tied to Gesell's anarchist ideas about the 'natural order' in which money should be exposed to loss of value like in case of agricultural products. In the case of the Spanish Civil War, the dissemination of political ideas of autonomy by the Popular Front was even more evident. It later translated into a competition between the two armies for the issuance of currencies such as currencies of the fascist and currencies of the communist armies, which defined the 'enemy's currencies' depending on the point of view of the users. Emergency notes are of great importance for local economies to climb out of social, political and economic demise. Like other issues in contexts of war and demise, who makes money becomes an area of contestation, because it denotes who enables economic life by organising exchanges and also who provides social order.

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