Sustain Sci
DOI 10.1007/s11625-015-0298-4

SPECIAL FEATURE: ORIGINAL ARTICLE

Socially Sustainable Degrowth as a Social-Ecological Transformation

An overview of local credit systems and their implications for post-growth

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Received: 6 December 2014 / Accepted: 25 March 2015
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Abstract Credit and debt are bound to play a central and challenging role in a post-growth economy, seen as an economy that seeks to stabilize or downscale production and consumption for more well-being and sustainability. This is so because on one hand the current credit system is widely seen as the major engine behind the unsustainable imperative of growth. On the other hand, access to credit is essential for the survival of countless low-income households worldwide. In this context, what kind of credit arrangement is compatible with a sustainable and equitable economy? This paper provides the first preliminary overview of the main types of local credit systems—classical as well as alternative—with an eye on their implications for post-growth. Traditional credit, bank credit, microcredit, credit unions, negative interest credit, social credit and mutual credit are in turn briefly examined with some historical examples. The interest rate, the kind of currency and the prospect for reciprocity between creditors and debtors all play a crucial role in the possibility of a post-growth economy. Alternative credit arrangements may develop through different stages and levels. Here and now, building and reinforcing local mutual-credit systems are a way forward provided that it is also adequately politicized. With the worsening of the debt crises and the increasing difficulties for further growth to occur, post-growth-friendly credit systems are likely to come back on the agenda of community economies.

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Keywords Credit · Debt · Money · Growth · Degrowth · Post-growth · Capitalism

Introduction

Although credit predates capitalism, it is only through capitalist banks that credit—and therefore debt—was able to develop quantitatively and qualitatively to today's full extent. This development of credit and debt has been identified as the major factor behind the inherent instability of the system as well as behind the unsustainable imperative of endless growth (e.g. Binswanger 2006; Daly 1996; Douthwaite 2000, 2012; Heinsohn and Steiger 2013; Hutchinson et al. 2002; Lietaer et al. 2012; Rowbotham 1998). In this context, credit and debt are bound to hold a central place in the debates on the transition to a "post-growth economy", namely an economy that seeks to downscale and/or stabilize production and consumption for more well-being and ecological sustainability. The term "post-growth", in other words, encompasses here both degrowth and steady-state economics broadly defined (Daly 1996; Jackson 2009; Latouche 2007; Kallis 2011; Martínez-Alier et al. 2010; Victor 2009). My aim will be to contribute to both bodies of literature, particularly because "post-growth" has a greater appeal in the global South than "degrowth".

While T. Jackson's much-discussed book, *Prosperity Without Growth* (2009), is a very valuable effort to make the idea of a steady-state economy politically respectable, its major weakness is perhaps to systematically overlook the credit-based engine behind growth as well as the possible alternatives. This also holds true for many recent publications on degrowth. The promotion of post-growth cultural change is certainly crucial in any transition, but it

Published online: 28 April 2015

only provides a partial answer to the problem of growth as our current institutional system, based on specific property rights generating modern credit and money, *requires* growth to occur (van Griethuysen 2012; Heinsohn and Steiger 2013). In other words, the post-growth movement—if it is to suggest viable socioeconomic alternatives—needs a clear view on credit, debt and their consequences.

This article intends to shed some preliminary light on these issues. It provides the first overview of the main "local credit systems", defined as currency-based arrangements of uncompleted exchanges whose primary goal for the debtor is to acquire goods and services at the level of the community. This restriction to the "local" is based on the idea that the community level represents the most promising immediate starting point for post-growth experiments (Healy and Graham 2008; Fuller et al. 2010), as alternatives to GDP growth continue to be far away from the agenda of all governments (with the possible exception of Bhutan). Accordingly, this overview does not discuss the credit structures of the corporate and public sectors but focuses instead on "classical" local credit systems (when established and widespread) as well as on "alternative" arrangements (when relatively recently created in response to the shortcomings of bank credit). In so doing, I will certainly not be able to do justice to the rich history of credit experiences and institutions. My goal is to start tackling the following basic questions: Why do people borrow? How? That is, through what main categories of loan arrangements and with what implications in terms of growth? And finally, what kinds of credit system would be compatible with a sustainable post-growth economy?

After some background information on the causes of credit, I briefly present the major systems of credit at the local level. I start with the existing systems both in the global North and South, summarizing their implications for growth and then go on with the alternatives, before concluding with the main lessons to be learned.

The causes of credit

Money-based credit has been practiced throughout the last 5000 years of human history (Graeber 2011). However, the specificity of the modern credit economy lies in the generalization of state-enforced interest-bearing and guarantee-based loans. By the second half of the sixteenth century, after much politico-ethical controversy, such loans started to be legalized in most regions of Western Europe. The morality of charging an interest was relegated to individual conscience and the state, starting with Henry VIII of England, largely ceased to hamper "usury" (Jones 1989). Although much variation existed between the different European regions, the use of credit became routine throughout society (Muldrew 1998; Fontaine 2008), partly because the money supply expanded much more slowly than the need for it, and partly because lending became openly profitable. The general context was also favourable, characterized by new emerging property relations,[1] rapid urbanization and increases in population size. The modern credit engine was launched—largely unintentionally—and it never stopped (Gerber 2014). The "financial revolutions" of the late seventeenth and eighteenth centuries only accelerated the process (Roseveare 1991), which paved the way to the "thermo-industrial revolution" (Grinevald 1976).

But why did and do the "common man and woman" borrow in the first place? Going beyond the ideal–typical middle-class Westerner, it appears that many people borrowed, and continue to do so, in order to buy food. In the countryside for example, many tenants or small commodity producers become dependent on creditors insofar as their sustenance depends on one or a few cash crops generating income only intermittently after the harvest seasons. They are thus forced to borrow during the unproductive seasons. Traditional subsistence-oriented peasants, on the other hand, have elaborated complex polycultures supplying food all along the year. But even in these cases, a bad harvest can make creditors indispensable again. The farmers' credit dependency has increased dramatically with the worldwide "Green Revolution". As Perfecto et al. (2009: 49) put it, "It is no exaggeration to say that the Green Revolution was one of the principal forces for drastic social change in the twentieth century, perhaps the most important of all". And credit played a central role in this "revolutionary" change. Farmers were more than ever caught in credit/debt relations in order to buy seeds, inputs and technology.

Historically, people also borrowed money in order to pay taxes. During the global transition to capitalism, authorities quickly moved from taxes in kind and corvée labour to cash. The tax system played a key role in forcing people to enter the market, including in the colonies. It drove peasants into cash crops or into the labour market. "Much of what economists and anthropologists have called 'cash hunger' in the Third World owes its origin to colonial fiscal policy" (Scott 1976: 97–98). However, it is less recognized that such "forced commerce" would not have been possible without credit, which reinforced the whole process of market dependency (Bhaduri 1986; Schrader 1997). Over the course of history, the need to borrow was therefore closely associated with the need to pay taxes.

[1] In Western Europe, wage labour drastically expanded around the fifteenth and sixteenth century. Dyer (2005) estimates that in the sixteenth-century countryside of England, about half of the labour consisted of wage labour.

In addition, people from all classes typically enter credit/debt relations as a result of special events of their life-cycle such as weddings, funerals, sicknesses, new establishments and, today, schooling expenditures. The purchasing of a house (mortgage) is a classical cause of indebtedness in the West, while in some regions of South Asia, weddings generate heavy debts. Finally, a last major cause behind the need for credit is, of course, related to productive investments. Contrary to what is often thought, early modern peasants also borrowed to improve their production and this phenomenon did not only concern rich peasants (e.g. Duby 1998). In France, as far back as the early eighteenth century, investment credit was as important as consumption credit, if not more (Postel-Vinay 1998). This fact is consistent with the assumption that capitalism, characterized by self-sustaining expansion, had already taken roots in the Western European countryside. Through credit, small commodity producers invested in commercial activities in order to preserve the independence of the familial economy under the conditions of emergent market competition (Kriedte et al. 1981).

Credit is therefore not only indispensable to virtually anyone starting a business but also essential to the very survival of households and communities in money-based economies. Let us turn now to the main local institutional arrangements providing credit.

The classical forms of credit organizations

Historically and geographically, there has been a large variety of credit institutions. Nevertheless, it is possible to identify a limited number of broad categories. While examining them, we will keep an eye on their implications on (post-)growth.

Traditional credit systems

Family and friends remain today the first source of loans everywhere around the world. In many regions, another classical source of credit is the “patron”. Patron–clients relationships rest upon the provision by the patron of some subsistence rights for the client (mainly physical security and basic livelihood), while the latter is expected to display a kind of filial loyalty to the patron (Scott 1972). They are usually rooted, more prosaically, on rent and/or debt bondage, and the terms of exchange depend on the relative bargaining power of the two classes. Within the transition to capitalism, these traditional bonds—where credit not only plays a key role both in subordinating clients but also in supporting them in particular circumstances—were largely replaced by commercial credit relationships with shopkeepers, merchants and moneylenders.

Rotating savings and credit associations (ROSCAs) encompass a wide range of formal or informal schemes of group savings and credit. They have been documented in many areas of the world, North and South (Bouman 1995). Each member regularly contributes the same amount to a general pool which is then alternately given, by various means of selection, to one member of the group. Geertz (1962: 262–263) suggested that ROCSAs should be regarded as an intermediate institution in the transition to capitalism: over time, “The rotating credit association becomes more and more like a specifically economic institution, a ‘firm’, with its own pattern of value integration. In this sense, the form is, perhaps, self-liquidating, being replaced ultimately by banks, cooperatives, and other economically more rational types of credit institutions”. However, the flourishing of ROSCAs in so many contexts is a sign that the institution remains very strong.[2]

Pawnbroking refers to loans offered against personal items used as security. The debtor may, within a given time period, purchase back the pawned item for the amount of the loan plus interest. If the loan is not repaid on time, the pawn is sold by the pawnbroker (Bouman and Hospes 1994). A key potential of pawnbroking has been the possibility of converting goods into money, which played a central role in the transition from subsistence-oriented to market economies. Pawnbroking (such as “mounts of piety”, a charity-oriented form of pawnbroking) frequently represents the only commercial credit used by the poorest sectors of the population and may therefore be the only one truly deserving the prefix “micro”. Pawnbrokers typically flourish during economic crises, including in the West (Schrader 1997).

Advances on sales or wages are a most common form of credit. It can take many forms, but in its classical appearance, the creditor buys in advance the harvest or the workforce of the debtor and defines the price or wage, including an implicit interest rate.[3] From the perspective of the creditor, the function of such advances is to control the production in a cheap way, frequently leading to debt bondage (Brass 1999). In more financialized economies, such advances also take the form of bills of exchange, which remained absolutely central to trade until recently (Hutchinson et al. 2002). Through a merchant’s bill of

[2] A sister form of credit is the Accumulating Savings and Credit Association (ASCA). Unlike ROSCAs, ASCAs appoint one member to manage and fructify the fund. After a defined period, all the loans are called back and the fund, plus accumulated profit, is distributed to the members. In agreement with Geertz, ASCAs represent a clearer move towards market-oriented lending activities.

[3] Subcontracting credit can be seen as a modern variant—sometimes referred to as “disguised proletarianization”. It allows larger businesses *not* to hire labour nor purchase land. Such businesses-cum-creditors are often better able than banks to monitor and enforce credit contracts (Key and Runsten 1999).

exchange, a manufacturer can obtain money from a bank in advance of his production. This represents the beginning of modern interest-bearing money (more on that later).

There is a large variety of moneylenders with different characteristics (as well as an abundant literature on them). There are occasional, semi-professional or professional moneylenders. They may be itinerant, peddling from door to door or established in an office. Some are also money-guards and collect savings. Stable moneylenders are usually more prevalent in urban regions and do not only supply loans to small commodity producers but also to wealthier farmers, merchants and small industries. The relationships between moneylenders and borrowers are multifaceted. Many lower class people continue to prefer borrowing from moneylenders in spite of exorbitant interest rates. Contrary to governmental and private agents, the moneylender is often a community figure who knows his/her debtors and their problems and is familiar with the periodic cash needs for weddings, funerals or religious ceremonies. Moneylenders do not necessarily target the control over their debtors' land or assets. Rather, like formal bankers, their fundamental objective is to collect interest as long as possible, leaving the principal unpaid. Overall, smallholders remain under an intense pressure to keep their promises—a process that frequently leads to forced commerce and growth.

Bank credit

When compared with traditional credit institutions, modern bank credit has evolved along three major new lines: expansion of the financial sector, introduction of the credit card and greater involvement in investment credit (as opposed to the consumption loans of traditional creditors). Since our perspective is global and community-oriented, let us focus on the implications of the third point. Bank credit has had a critical role in the kind of growth that is taking place. Banks "decide which individuals and firms should receive advances of credit, and which should not. Equally, they decide which industries are to be developed, and where. […] The issuers of credit are therefore, and always have been, central to the political economy of capitalism" (Hutchinson et al. 2002: 143–144). In particular, banks have been key organizations ensuring the continuous growth of the economy under capitalism.[4] This has taken place through the strict formalisation of interest-bearing and collateral-based credit, the creation of credit money (more below) and the selection of the borrowers based on the expected profit performance.

Bank creditors start their operations by selecting an appropriate region characterized by the existence of basic infrastructures, the proximity to market outlets and high population densities. A particular focus is given on the local "credit culture" (i.e. on loan repayment records) or, if needed, on its propensity to be created. Second, bank creditors select clients. This requirement remains central even if the recent "subprime crises" may partly contradict it. The "bankable actor" is characterized by sufficient asset base, income, commercialization degree and experience. Accordingly, most banks do not provide start-up finance and only support expansion or renewal of existing activities. Information on the prospective borrower's character and past credit performance is crucial for assessing his/her creditworthiness. In her case study in the US countryside, Dudley (2002) describes how local bankers observe how clients are dressed and how clean is the interior of their car. The information can also be collected from credit registries or through informal communications with other creditors, local authorities or group leaders. A gradation from small to larger loans is a classic educational procedure where larger or longer-term loans are only granted to clients who have proven their ability to repay short-term credit on time.

Third, banks put pressure on borrowers through the use of collateral (the equivalent of supervision in the firm). In the absence of formal property titles, other collateral substitutes exist such as access to future loans, pledging personal assets with high use-value, interlinked contracts, etc.[5] Peer pressure through "social collateral" (joint liability groups, personal guarantors, etc.) is increasingly used. Overall, there is much reliance on the borrower's interest in maintaining a good reputation, both in the community and with the bank.[6] The pressure on the borrower has been useful to other capitalists who are not necessarily creditors themselves. Ford (1988) gives the example of US companies preferentially hiring employers with mortgaged houses as they are less likely to cause trouble on the workplace.

Fourth, banks must monitor borrowers to ensure that the loan is used to generate the investment's projected cash-flow. From the lender's perspective, social collateral has

[4] One could add that under existing communism, the state replaced private creditors as the main selecting engine behind growth. But in both cases, with some nuances, undemocratic and exponential growth is largely unquestioned.

[5] The problem of collateral explains why finance enthusiasts have constantly pushed for legal reforms easing contract enforcement and foreclosure procedures (e.g. de Soto 2000). A wider variety of collateral has also been suggested. It has for instance been proposed to enhance the use of livestock as collateral through implantation of microchips in the animals in combination with GPS technology (FAO 2003).

[6] A variety of side measures may be taken to that aim. For example, "moral pressure is exerted by publishing the names of defaulting borrowers, or announcing their names on the local radio network" (FAO 2003: 60).

the merit of transferring part of the supervision costs to the group. And fifth, banks must be ready to impose sanctions. It is essential for banks to be seen as serious about the possibility of foreclosure. As a Food and Agriculture Organisation (FAO) report argued, "It is the threat of action, rather than the action itself, that is useful in maintaining credit discipline. The effectiveness of this mechanism depends to a certain extent on the ignorance of the borrowers" (FAO 2003: 52). But even if collateral foreclosure was unproblematic, banks would still consider this option as a last resort since a longstanding relationship with a disciplined debtor is more profitable.

Aggregated over many years, all these micro-measures represent a powerful force towards credit discipline, payment of interest and therefore economic growth.

The consequences of credit

I owe, I owe, so off to work I go![7]

The absolute necessity of credit in entrepreneurship and industrial growth is a commonplace of economic history. However, what is less recognized and investigated is the reverse relation: indebtedness—before and during capitalist expansion—as a trigger for economic growth. I provided elsewhere a study of the role of indebtedness in the evolution of capitalism (Gerber 2013, 2014). There, I argued that across time and space, credit and debt relations have not only been a key factor behind social differentiation through the control of land, labour and capital. They have also shaped the economic actors' mentality and behaviour by encouraging solvency-driven values and norms. More specifically, credit/debt relations have fostered market discipline by forcing the borrower—across social classes—to calculate, pay, trade, compete, work, intensify and cut costs.

J. H. Boeke (1946), the main theoretician of the "dual economy" where traditional and modern sectors coexist, once remarked (largely a-critically) that the creditor is the peasant's "indispensable guide through the labyrinth of the money economy" (quoted in Schrader 1997: 153). There is something profoundly true here. Interest-bearing and guarantee-based loans have indeed "guided" debtors by generating some of the key pressures that prevail in money-based economies (and especially in capitalism), namely the pressures for growth, short-termism and cost-cutting innovations whether they are technological or institutional (Steppacher 2008). Of course, these pressures depend on the level of indebtedness. We could draw a curve showing how the disciplining effect of debt increases with the level of indebtedness (as compared to the income) up to a certain point where it decreases again. In effect, passed a high level of outstanding loans, it is the creditor that may be in difficulty, as J. M. Keynes pointed out ("Owe your banker £1000 and you are at his mercy; owe him £1 million and the position is reversed"). It is in the interest of the lender to reach the point of maximum pressure but the latter may be perilous, as the recent financial crisis has shown. In this case, governments had to be called in to maintain the pressure on borrowers when banks were in danger of collapsing.

The different categories of local credit systems briefly described above are all currently in use at the urban and rural community level, both in the global North and South. They can also be positioned along a continuum going from low pressure for growth (mutual, patron–client loans, ROCSAs) to medium pressure (pawnbroking, advances, moneylending) to higher pressure (bank credit). As we reach the most modern forms of credit, there is an increased potential for fostering market dependency and growth. How to get out of these dynamics? What alternatives exist? This is what we are exploring next.

Modern credit alternatives

Microcredit

Microcredit has often been presented as a "pro-poor alternative" to standard banking. Microcredit organizations began in the 1970s in South Asia as non-profit organizations backed by government subsidies. By the 1980s, the "new financial paradigm" had taken over, notably using market-based interest rates. Microcredit schemes have since then quickly spread around the developing world as they often turn out to be lucrative businesses (Bateman 2010). From the viewpoint of borrowers, however, the evidence cited for the successes of microcredit is surprisingly weak. It is usually anecdotal or involves very limited case study material. There has been so far no systematic effort to establish the real impact of microcredit. After a period of generalized enthusiasm, criticism is in fact now increasing. Microcredit organizations often charge high interest rates and use coercive methods of recovery and aggressive expansion campaigns (e.g. Roy 2010). The benefits for women have been questioned (e.g. Rahman 1999), and a general conclusion seems to indicate that the growth potential of microcredit is largely appropriated by those with existing business. The differences with standard bank credit only concern the amounts of money loaned and the types of collateral accepted. But both types of credit share an inbuilt propensity—directly through investments or indirectly through the payment of interest—to fuel economic growth.

[7] Popular US bumper sticker parodying a Walt Disney song.

Credit unions

Credit unions are also straightforward candidates as alternative credit providers. They are called by various names around the world (e.g. cooperative banks, savings and credit cooperatives, *caisse populaire*, etc.) and range from volunteer self-help organizations with a handful of members to cooperatives with several billion dollars in assets and hundreds thousands of members (Evans and Ford 2003). Credit unions pool their members' savings deposits and shares to finance their own loan portfolios rather than relying on outside capital. F. W. Raiffeisen and F. H. Schulze-Delitzsch are considered the fathers of the modern credit cooperative. Raiffeisen's model, which focused on the rural world, has had a long-lasting influence (Goglio and Leonardi 2010). In the nineteenth century, Germany was characterized by the progressive decline of small farmers and the rise of agribusiness, and Raiffeisen's goal was to free smallholders from depending on outside financial services and to apply the principle of self-help in the development of small-scale commercial activities. He sought to furnish the necessary capital to smallholders, at reasonable rates and usually without collateral, relying on solidarity and Christian values. The essential rule was to restrict as much as possible the geographical operation area, thereby allowing members to have a good knowledge of co-members in order to appraise their solvency and to monitor investments. The cooperative was governed by a general assembly which could decide on any management issue (e.g. amount of capital to lend, interest rates, terms for repayments), but day-to-day business activities were managed by appointed subgroups.

Overall, the main objective of credit unions is certainly not to go beyond growth. Quite the opposite, credit unions seek the best integration possible of its members into the market, while keeping a more or less democratic and social nature. In that sense, credit unions may not necessarily be of great help to the post-growth project. Socialists have also been critical of conventional credit unions, fearing the "embourgeoisement" of subordinate classes and emphasizing production cooperatives rather than bank cooperatives. Specific worker or state-run credit unions, however, would certainly be compatible with forms of market socialism. In any case, Raiffeisen's model has proven very influential, spreading in the entire world, and still constitutes the ideological basis of the World Council of Credit Unions.

The need to tackle the nature of money

It should be clear, at this point, that post-growth-friendly credit arrangements have to go deeper. They must tackle the issue of money. Monetary systems often cannot be distinguished from "credit systems". Official money is always a liability (a "debt") of the issuer (Wray 2012). More precisely, modern money is "a system of centralised, national currencies (or regional currency in the case of the euro), funded through bank debt, enforced by a central bank (frequently private and profit-making) and run as a monopoly" (Lietaer et al. 2012: 14). The bulk of the money we use on a daily basis has been created by commercial banks through credit (McLeay et al. 2014). The key point here is that the circulation of such interest-bearing money is creating constant systemic pressures towards growth. Because everyone—including banks—needs to pay interest within a competitive context, everyone tries to extract a corresponding surplus from their transactions and activities. Increased production, consumption and the issuing of new loans become the only options to keep ahead of the interest payments. As a result, the whole economy is geared towards exponential growth (Daly 1996; Douthwaite 2000, 2012; Hutchinson et al. 2002; Loehr 2012; Lietaer et al. 2012; Rowbotham 1998).

Full-reserve banking is the major policy proposal for fixing the problem of growth-inducing money from a post-growth perspective (Daly 1996, 2012; Jackson and Dyson 2012; Robertson 2012). But is it sufficient? This measure would put control of the money supply in the hands of governments rather than private banks. With full-reserve requirements, every dollar loaned to a borrower would be a dollar previously saved by a depositor (and not available to her during the period of the loan), thereby re-establishing "the classical balance between abstinence and investment" (Daly 2012: 185). Such measure would most certainly reduce growth because it would reduce borrowing as well as speculative growth ventures. Down payments on houses would be much higher; consumer credit would be greatly diminished; credit cards would become debit cards; and money as such would become more neutral with respect to growth. However, interest-bearing credit—although reduced—would still be practiced relatively widely, and an increase in the volatility and average levels of interest rates is likely to happen (Dittmer 2014). This would be incompatible with a sustainable degrowing economy and possibly also with a steady-state one (if not accompanied with other measures, as Daly himself has suggested). In effect, the sole presence of high positive interest rates—together with a market-based property system—would continue to push for expansion (Heinsohn and Steiger 2013; Loehr 2012).

It appears therefore that post-growth-friendly credit systems will have to use alternative forms of money. I will not provide here an overview of local currencies (not all of which being credit-based) but of local credit systems based on alternative money.

Negative interest credit

One apparently degrowth-friendly option would be to lend money at a negative interest. The most prominent proposal of a negative interest credit-cum-monetary system is the "decaying money" proposed by S. Gesell in the 1910s (Gesell 1958). Gesell's basic idea was to use paper currency to which a stamp costing a small fraction of the note's value had to be affixed periodically in order to keep it valid. Like any physical commodity, such money "goes bad" at a rate determined by the value of the stamp required and the time period for fixing stamps—which corresponds to a negative interest rate. Gesell believed that people should be indifferent as to whether they possess money or goods. He argued that money should thus be afflicted with the same depreciation as non-stockable goods. In the current system, money holders have a privileged position compared to holders of real capital, and the result is an increasing polarization of wealth where money generates more money—a critique reformulated thermodynamically by Soddy (1926) who knew Gesell's work (Merricks 1996). Gesell claimed that currency decay would end the artificial scarcity of goods and would force money to circulate freely.[8]

Although virtually unknown during the second half of the twentieth century, Gesell's ideas enjoyed a wide following in the 1920s and 1930s and influenced prominent economists. Keynes famously wrote that "the future will learn more from Gesell's than from Marx's spirit". One of the best-known applications of decaying money happened in the small town of Wörgl in Austria between 1932 and 1933 (Lietaer 2001; Hutchinson et al. 2002). Under the mayor M. Unterguggenberger, Wörgl managed to redress the high levels of unemployment, repave streets, rebuild the water system and build new houses, a bridge and even a ski jump. The "Wörgl miracle" was not due to a kind of Marshall Plan initiated by the mayor; the bulk of the work was provided through the circulation of the stamp scrip after the first people contracted by the mayor spent it. In June 1933, Unterguggenberger addressed a meeting with representatives of 170 other towns and villages. Soon afterwards 200 townships in Austria wanted to copy it, which posed a huge threat to the central bank. After the case was lost at the Supreme Court, it became a criminal offence in Austria to issue local currency.[9]

[8] Gesell strongly believed in free market—the only system, he thought, in agreement with human nature—but such free market, in order to be real, had first to be freed from the rent and the interest. Only then would everyone start with equal opportunities.

[9] In 1933 in the United States, at least a hundred cities were preparing to launch stamped currencies of their own. But Roosevelt eventually banned all alternative currencies by executive decree when he launched the New Deal because it would mean a loss of central government power (Lietaer 2001).

A negative interest credit-cum-monetary system would be "radical" only if made permanent. Levying a charge on reserves has already been proposed by mainstream economists as a temporary measure to force the banks to restart lending until the economy begins growing again.[10] By reversing the discounting of future cash flows, negative interest rates would change the entire definition of what is "rational" or "economic". Creditors (like banks) would have an incentive to lend money at a negative interest rate only if their deposits would depreciate at a higher rate, as in a decaying money system (creditors would maintain their capital through other financial services). Whether local decaying credit-cum-monetary system would meet the objectives of a sustainable non-growing economy remains unclear (Loehr 2012). While preventing financial growth, it would nonetheless encourage exchanges and most probably the growth of the physical economy.

Social credit

C. H. Douglas was the founder of the "social credit" movement which began in Britain in the 1920s and continued up until today through different organizations (Hutchinson and Burkitt 1997). Douglas clearly saw that the capitalist economy was dependent upon continual new investment and growth. Like Gesell, he believed that the problem of scarcity had long been solved and that the real problem was one of distribution. He was struck by the contradiction between the people's lack of purchasing power and the abundance of goods, showing that the sums paid out in salaries and dividends were always less than the total costs of goods and services produced each week. Consumers did not have enough income to buy back what they had made.

Douglas therefore proposed the introduction of different "social credit" mechanisms, from the local to the national levels. At the national level, he recommended paying all households a monthly universal basic income—the contribution for which he is best known and which also figures on the agenda of the post-growth movement (Kallis 2011). Douglas defended the idea that money should become an instrument of distribution, that is, a debt-free ticketing system created by the government in sufficient quantity to match purchasing power and prices at any time. At the local level, the power to decide who should obtain credit and under what conditions should be democratized and taken back from banking institutions—hence his use of the

[10] Another equivalent to negative interest rates is of course inflation. Inflation is similar in its effects to a depreciating currency in that it encourages the circulation of money, discourages hoarding and makes it easier to repay debts. However, in a decaying money system, it is the currency that depreciates, not prices that go up. It would therefore not impoverish people with constant income.

term "economic democracy" (Douglas 1920), not synonymous here with the socialization of production but with a socialization of credit.

Social credit became a major political movement around the world. In 1935, a social credit government was elected in Alberta, Canada, but every attempt to implement a financial system based on Douglas's ideas was overruled by the central government. His ideas became then deserted during the post-war period characterized by high growth rates and the welfare state. But Hutchinson et al. (2002) argue that the Working People's Bank (*Lankide Aurrezkia*) of Mondragon, Spain, together with the worker cooperatives of the same village, was founded on identical principles as those outlined by Douglas in 1920. The bank is actively involved in the management of the cooperatives and shares risks with the workers–owners. Douthwaite (1996) points out that since the low interest rates have, at least in the past, been largely independent of those on the Madrid money market and capable of adjustment to a cooperative's circumstances, they are better seen as a combination of payment for services rendered and a form of profit sharing, rather than pure interest as normally understood. Interest rates represent a financial "performance target" for the cooperative, not an absolute obligation to pay as there is no question of the bank forcing it into liquidation if it is in difficulty. Instead, the ailing cooperative is likely to be reorganised and, if necessary, refinanced on a risk-sharing basis. Hutchinson et al. (2002) argue that the Mondragon experiment provides the most successful example of a community-run loan fund with striking similarities to social credit.

Douglas was critical of Keynesian full-employment goals and policies. A basic income would indeed reduce the compulsion to work, a possibility also reflected in the reality of modern technology. This was far more sensitive, he argued, than the blind pursuit of full employment and growth regardless of needs—a pursuit that was merely fostering the people's servitude to the economy. Douglas also severely criticized Gesell's decaying money: "Gesell's theory was that the trouble with the world was that people saved money. [Gesell's solution was therefore] to stimulate trade—that you have to get people frantically buying goods—a perfectly sound idea so long as the objective of life is merely trading" (Douglas 1936: 7). Douglas wrote that if the purpose of the economy was to allow "the production and distribution of goods as, when, and where they are required", then a socialization of credit is required (quoted in Rowbotham 1998: 333). Such views are in agreement with the post-growth project.

Mutual credit

Another major way of socializing credit at the local level is through mutual-credit systems which do not operate through money as the initiator of exchange but through exchange as the creator of a debt or credit. They include different types of credit arrangements such as time-based credit, credit-clearing cooperatives and—most prominently—local exchange trading systems (LETS). Not all local currencies correspond to the definition of credit systems provided above and on which this article focuses. When a transaction takes place in a LETS, the account of the buyer is debited, and the account of the seller is credited by the agreed-upon sales price—whether or not the buyer has a positive account balance. This kind of systems has many applications and can be translated into work hours as in time banks (Seyfang 2010). Since the beginning of LETS in the 1980s, hundreds of such systems have taken root around the world with more or less success (North 2007; Kennedy et al. 2012).[11]

In many ways, small-scale mutual-credit systems are the successors of the oldest ways of providing loans and could be seen as modern components of reciprocity-oriented (Sahlins 1972) or gift/counter-gift economies (Caillé 2000). In gift-oriented economies, Mauss (1925) famously argued, the relationships between the people matter. Exchanges are also about creating friendships or working out rivalries or obligations. They are the essence of community life—as opposed to the capitalist marketplace where transactions are simply ways of getting one's hands on useful things. Along the same line, Eisenstein (2011: 350) argues that "today's credit system is an example of the privatization of the [...] 'credit commons'"—a community's general judgment of what project and who should be granted credit. There are different ways of dealing with the creditworthiness of community members, whether it is through social consensus, technical devices or the decisions of specialists. Today, commercial banks monopolize these functions, allocating credit towards its most remunerative use and thereby privatizing "credit commons".

Mutual-credit systems, as proponents of mutualism (such as Proudhon) and others have pointed out, are probably the most immediately feasible way of gaining some autonomy from the wider economy and especially from the standard credit system. They correspond to arrangements that, to use Marx's (2009: 16) distrustful terms,

[11] The Swiss WIR Bank is often presented as an example of a mutual-credit system (i.e. with no central issuer). This however is not the case in WIR where all credit is booked against the bank's central account. Created in 1934, WIR boasts today tens of thousands of individuals and small businesses all over the country—large businesses cannot join. Originally not-for-profit and following Gesell's ideas, the bank changed its status when expanding. It has a remarkably stable history and remained fully operational during times of general economic crisis (Arnsperger 2011). WIR "lubricates" rather than "obstructs" the wheels of the capitalist system, thereby not representing a big step towards a post-growth economy.

act "behind the back of society". While Marx and many contemporary radical economists are sceptical of such autonomist strategies, they are central to the flourishing literature on "alternative economies" (Gibson-Graham 2006; Healy and Graham 2008; Fuller et al. 2010). According to this approach, it is high time to question convenient all-encompassing abstract categories, such as "capitalism", and recognize a greater heterogeneity in the economy, characterized by the various forms of "capitalist", "alternative capitalist" and "non-capitalist" sectors. Mauss (1925) believed also that socialism could only be built gradually, from below, and that it was possible to begin building a new society "in the shell of the old", based on mutual aid and self-organization. Mauss thought that existing popular practices can provide both the basis for a moral critique of capitalism as well as glimpses of what a future society would be like. Along a similar line, Graeber (2011: 100) argues that "The sociology of everyday communism is a potentially enormous field, but one which, owing to our peculiar ideological blinkers, we have been unable to write about because we have been largely unable to see it" (a point shared by Cohen 2009).

However, the relevance of mutual-credit systems for post-growth remains controversial. Some degrowth supporters have defended them (e.g. Douthwaite 2012), while others have been sceptical (e.g. Dittmer 2013). In his review of LETS and time banks, Dittmer (2013) finds that there are no clear success stories of such mutual-credit systems as drivers of degrowth. He argues that LETS have been found to support alternative livelihoods only under specific conditions. Following Fuller et al. (2010), a clear distinction has to be made between "alternative-substitute" systems which are merely coping mechanisms when existing organizations have failed, and "alternative-oppositional" systems which actively and consciously seek to challenge mainstream institutions. Only the latter are likely to carry a post-growth transition. In that sense, alternative economic spaces must also be alternative, post-capitalist political spaces.

Synthesis of our findings

Table 1 summarizes our findings. The formality/informality of a given credit system reflects its degree of state backing. Only traditional and modern "autonomist" arrangements are classified as informal arrangements. The latter are all strongly community embedded and tend to be more open to post-growth options than the current state-enforced system. As we have seen, most microcredit schemes and credit unions cannot be viewed as post-

Table 1 Major families of local credit systems with some of their characteristics and consequences

	Informal (I) or formal (F) credit	Positive (+) or negative (–) interest	Loan in national (N), local (L) currency, or in kind (K)	Some consequences				
				Consumption	Investment	Creditor–debtor reciprocity	Pressure for growth	Post-growth compatibility
Personal loans								
Between equals	I	Ø	N/K	Y		Y		P
In patron–clients relations	I	Ø/+	N/K	Y	P	P		P
ROSCA loans	I/F	Ø	N/K	Y	P	Y		P
Pawnbroker loans	I/F	+	N/K	Y	P			P
Advances on sales or wages	I/F	+	N/K	P	P		Y	
Moneylender loans	I/F	+	N/K	P	P		P	
Credit union loans	F	+	N	P	P	P	P	P
Bank credit	F	+	N	P	Y		Y	
Microcredit	F	+	N	P	P		P	
Negative interest credit-cum-money (Wörgl-type)	I/F	–	L	P	P	P	P	P
Social credit cooperatives (Mondragon-type)	F	Ø/+	N	P	Y	Y		P
Mutual credit (LETS-type)	I	Ø	L/K	Y	P	Y		Y

Y yes, *P* possibly

growth-friendly alternatives. In fact, it appears that interest-bearing money created through bank credit has to be supplanted if a more profound socio-ecological transition is to occur. The post-growth compatibility of a negative interest credit-cum-monetary system and of some forms of democratic credit unions (like in Mondragon) is unclear and would need to be designed accordingly. Many mutual-credit systems can be fully in harmony with post-growth principles. In sum, three typical characteristics make credit arrangements incompatible with a post-growth economy: generalized positive interest rates, the cumulative dynamics of modern interest-bearing money, and purely profit-oriented credit allocation controlled by a minority of private actors.

Conclusions

Credit and debt are bound to play a key role in the post-growth project. First of all, as we have seen, the modern credit system can be seen as the fundamental engine behind the imperative of growth. Its transformation is therefore a key condition for a sustainable post-growth economy. This process may go through different stages and levels. At the community level, mixing the national currency with a local mutual-credit system is a possible starting point "in the shell of the old". I see no contradiction between post-growth and the coexistence of community-run pawn-broking, ROSCAs and/or credit cooperatives, if designed and politicized accordingly. At the national level, a Douglasian-type social credit scheme (universal basic income and ticketing system) would cancel much of the routine needs for credit and is likely to allow post-growth values to develop. At this stage, no miraculous changes in human behaviours would be necessary, "only" a massive political weakening of the creditors. Ultimately, whether a sustainable post-growth economy is possible without a large-scale socialization of investment credit (as in Schweickart 2002) remains an open question. These considerations may seem today out of place but with the worsening of the debt crises and the increasing difficulties for further growth to take place (due to resource peaks and socio-environmental resistance), they may prove relevant again to a larger part of the population, including to critical researchers whose inputs are crucially needed.

Secondly, credit and debt are also central to the post-growth project as potential triggers. Indebtedness is an inflammable socio-political issue. Graeber (2011) noted that "Through most of history, when overt political conflict between classes did appear, it took the form of pleas for debt cancellation". Debt was an important factor behind the peasants' war in Germany (1524–1525), Europe's largest popular uprising prior to the French Revolution. Debt-based revolts occurred throughout India's history since the generalization of interest-bearing and collateral-based credit. The Santhal rebellion (1855–1857), the Deccan Riots (1875), unrest in Punjab (1900s) and under the Great Depression (1930s) were all targeted at creditors. Recently, in the West, grassroots anti-debt activism is bourgeoning: in many regions of the United States, it is linked to the Occupy movement;[12] in the United Kingdom, "Strike Debt" is just starting; and in Spain, the Movement of Mortgage Victims (*Plataforma de Afectados por la Hipoteca*) has been growing since 2009. Regarding the public debt, an "International Citizen debt Audit Network" has recently been formed and gathers organizations from Europe and North Africa. With the worsening of sovereign debts, mortgage debts, credit card debts, student debts and so on, it is expected that credit-centred struggles and organizing will increase. The present status-quo can only be sustained as long as the population is willing to accept more austerity and more income devoted to servicing debt.

Acknowledgments Four anonymous reviewers are gratefully acknowledged. All errors are mine.

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[12] I was able to participate in some anti-foreclosure actions in the Boston area in 2011–2012.

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