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A CONCEPTUAL FRAMEWORK FOR CLASSIFYING CURRENCIES

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ABSTRACT

An impressive variety of new forms of money has aroused in recent decades from various groups of people and various kinds of institutions. These currencies are at the heart of intense debates, which raise important, but often neglected, normative issues. The diversity of their goals, uses and characteristics is so large that it makes some preliminary distinctions necessary. This paper aims at providing a proper background for the discussion of the possible merits and drawbacks of different kinds of currencies. It proposes a classification that demarcates currencies according to how they relate to several crucial normative issues. Its aim is to show, for every type of currency, and as unambiguously as possible, to which side of these controversies it lies.

KEYWORDS

Money, alternative currencies, typologies, classification.

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1. INTRODUCTION

One of the recurring issues in the literature on “complementary” or “alternative” currencies is to identify adequate ways to classify these currencies (Blanc, 2011). Indeed, even if they all constitute a kind of money, they are so numerous and diverse that preliminary classifications appear necessary. Until now, classifications have been mostly designed to discuss the nature of such currencies (Blanc, 2011) or their empirical impact (Place and Bindewald, 2015). However, few works have studied the ethical issues they raise, despite their importance for understanding such currencies. This article aims at fulfilling this gap and proposes a classification that demarcates currencies according to how they relate to three crucial normative issues. Its aim is to show, for every type of currency, and as unambiguously as possible, to which side of these controversies it lies.

The creation, regulation and management of money and monetary policy have raised numerous normative issues (for a review, see de Bruin et al, 2018). However, this article focuses on three of them, which recently have been at the centre of intense debates. Despite its focus on these three issues, the proposed classification can be broadened to other debates, a task that is left for future research. The first issue concerns the legitimate use of the state’s coercive power over money. In many countries, the state compels people to accept its legal tender in payment. This could be different, though. People could only use currencies, such as Bitcoin or Local currencies, which nobody is forced to accept in payment. Within the literature on complementary currencies, most authors generally consider that their use is and should remain voluntary (e.g. Blanc, 2018a). Others are more radical and call for the abandonment of all legal tenders (Hayek, 1990). Accordingly, this article draws a first distinction between currencies that are legal tender (official currencies) from those that are not (alternative currencies). In this article, therefore, alternative currency means “non-legal tender” currency (unless stated otherwise)[i]. Second, this article turns to the issue of citizen’s participation in monetary policy, which has acquired a central place within the literature (e.g. Meyer and Hudon, 2017). It separates currencies whose creation and circulation are handled under the control of users (participatory currencies, such as LETS or Local currencies) from those whose management is independent of users (non-participatory currencies, e.g. the euro). Finally, the last distinction relates to the question of whether money’s purchasing power should be restricted according to some specific criteria (within a local area, or to a certain community for instance). Indeed, these restrictions are at the heart of many Local currencies, LETS or regional currencies. Accordingly, the third distinction distinguishes currencies that may serve as a universal means of payment (universal currencies) from those whose uses are limited according to a certain domain (bounded currencies).

Providing a precise description of how currencies differ may greatly help to structure the ethical discussions on their benefits and drawbacks. On the one hand, as Hodgson (2019) argues, finding precise demarcating criteria is necessary to ensure mutual understanding and efficient communication within a scientific community. Before studying and perhaps evaluating a group of objects, one needs to see how it differs from all other groups as precisely as possible (Hodgson, 2019, p. 207). On the other hand, demarcating criteria cannot be arbitrary. We should seek for relevant criteria that can help scientific inquiry (Olsthoorn, 2017, pp. 153–154). Accordingly, this article proposes criteria that demarcate currencies according to how they relate to specific normative issues.

However, building relevant classifications in social sciences is a complex task. Currencies are social constructs (Ingham, 2004), not natural kinds. They are not independent of social facts, from how people perceive them and judge them (Hacking, 1991). It may, therefore, be impossible to build purely descriptive classifications, detached from people’s perceptions and judgements. Moreover, definitions often have “fuzzy boundaries” (Hodgson, 2019, p. 209) that prevent any precise demarcation. These two problems are not overwhelming, though. Even if crystal-clear precision is out of sight, this remains a valuable ideal. That reality is fuzzy should push us towards more conceptual clarity, not less (Hodgson, 2019, p. 209). Similarly, when facts and value judgments are intertwined, one should seek for definitions and classifications which make explicit the normative values at stake, so that these discussions can happen on fair terms (Olsthoorn, 2017, p. 174).

Before turning to the core of this paper, I need to stress that its goal is not to provide a definition of the nature of money “in general”. Money as a debt token (Graeber, 2011), or money as a social convention fulfilling a certain number of functions (Tobin, 2008), are possible theories (among others) that fit in with the approach taken here. Despite their numerous disagreements, these theories all recognize that, in modern societies, money is a medium of exchange that is widely accepted within a specific community. This simple definition may not be complete, but it suffices for the purpose of this paper.

The article unfolds as follows. Section 2 reviews examples of existing classifications. Section 3 shows that these classifications cannot provide a suitable background for the ethical analysis of different currencies and discusses general guidelines for building adequate classifications. These include making moral values explicit while seeking precision and exhaustiveness. Section 4 presents a proposal of three new distinctions satisfying these conditions. Section 5 concludes.

2. CLASSIFYING CURRENCIES: A BRIEF REVIEW

Several ways of classifying currencies coexist in the literature and often complement each other. As we shall see, their aim is twofold. They provide a map of existing currencies in an attempt to better understand the extent of their diversity and of their similarities (Blanc, 2011). They also aim at providing a suitable background for the evaluation of their impacts on society and the economy (Place and Bindewald, 2015).

Some authors propose complex classifications, which rely on multiple dimensions and sub-dimensions. Lietaer and Kennedy (2008, pp. 217–242) introduce a multi-layered classification, which relies on five dimensions: the purpose (or the goal) each currency pursues, the specific form that it takes (coin, note, electronic accounts, etc.), the function it serves (means of payment, store of value, unit of account), the way it is created, and its cost recovery mechanism. Joachain and Klopfert (2012) and Martignoni (2012) make similar attempts towards complex full-fledged classifications. Their criteria include the purpose, the basis of trust, the issuance mechanism, the cost recovery mechanism, etc. More recently, Bech and Garratt (2017) imagined an innovative approach (the "money-flower" approach), which is mostly aimed at classifying digital currencies, but which may be applied to other currencies. They classify currencies according to four properties: issuer (central bank or other); form (electronic or physical); accessibility (universal or limited); and transfer mechanism (centralised or decentralised).

Some classifications focus more specifically on so-called "complementary, community and local" currencies. Blanc (2011, pp. 7–9) ranks those currencies according to their order of appearance in time (See also Blanc and Fare, 2016, pp. 4–5). He proposes a four-stage classification. First came the Local Exchange Trading Systems (LETS), a kind of mutual credit systems. In LETS, the account of each member is credited each time this member provides a service and debited each time she receives a service from another member (Servet et al., 1999). Time exchange systems, such as Time Banks, constitute the second generation. In these schemes, the value of goods and services exchanged within a network depends on the time necessary to produce them. The third generation contains local and regional currency schemes, such as the Ithaca Hours or the RegioGeld, which circulate within a confined geographic area. Complex projects, involving both civil society and governments with the aim of promoting environment-friendly behaviour, constitute, according to Blanc, a fourth generation. This includes the NU-project in the Netherlands or the French SOL. Fare (2012) adds a fifth generation to these four: Carbon Currencies. These currencies are similar to carbon quotas but apply to the monetary system (Seyfang, 2009). Finally, in a more recent work, Blanc (2018a) also includes cryptocurrencies, such as Bitcoin, whose creation process and payment system are entirely decentralised and managed through an open-access protocol.

Seyfang and Longhurst (2013) and Michel and Hudon (2015) use a similar classification in order to evaluate the empirical impact of different kinds of currencies. First, they identify service credits (such as Time Banks), which allow members to exchange goods with other registered members of the network based on the time necessary to produce them. The second category includes mutual exchange systems, such as LETS. Local currencies constitute the third category. Their fourth category consists of Barter Markets, a special kind of mutual exchange system. The main example is the Argentinian "trueque" (Gómez, 2009). Members receive a kind of local currency as a form of interest-free loan and can exchange them for goods and services on specific local markets.

Most classifications, however, rely on the purposes (or objectives) at the centre of each currency. A first reason is that many advocates of such currencies often describe them as fulfilling specific goals. Lietaer and Kennedy (2008), for instance, insist constantly on their aim and potential specific benefits. A second reason is linked to the growing importance, within the complementary currencies' research field, of impact assessment programs (Dittmer, 2013;

Michel and Hudon, 2015; Seyfang and Longhurst, 2013). As Place and Bindewald (2015, p. 155) argue, "it is necessary to firstly focus on objectives and purpose before any other typological differentiation, in order to evaluate CCs against their own and diverse targets."

Lietaer and Kennedy (2008, pp. 217–242) separate currencies according to three different purposes: legal tender, for-profit currencies and social (not-for-profit) currencies. Tichit et al. (2016, p. 33) arrive at the same criterion (profit/non-profit) through a textual analysis of web data. Blanc (2007) proposes a similar classification based on the "logic" or "motive" behind each currency. Currencies may be linked to a political motive, a profit motive or a civic motive (Blanc, 2007, p. 32)[ii]. The first kind of currencies relies upon governments, municipalities or other political authorities. The classical examples of such currencies are the euro, the dollar but also local currencies created by local governments. The second kind falls within the domain of private firms. Loyalty schemes, such as Air Miles, belong to this second category. Finally, Blanc calls the currencies that have a civic motive "social currencies". Their purpose is to localize the economy, to foster local exchanges and, simultaneously, to transform the nature of exchanges into a social relation less impregnated by market values. According to the author, a currency is a social currency if it fulfils these three aims, and most importantly the third one (Blanc, 2007, pp. 38–39).

In more recent articles, Blanc clarifies his three-fold distinction (Blanc, 2013, 2018b). Following Polanyi (1957, 2001), he describes three spheres to which a currency can belong: the "redistributive" sphere (the state's sphere, which includes "public" currencies), the sphere of "exchange" (or the market's sphere, which includes "for-profit" or "business" currencies) and the sphere of "reciprocity", which covers relationships within the family and the community. "Social" or "associative" currencies belong to the later sphere. Blanc (2011) distinguishes between three classes of such currencies (which he also calls "civic currencies"), according to their specific aim. "Local currencies" are linked to territorial local projects (such as fostering "local resilience"). "Community currencies" point towards community projects that foster positive social relations and social empowerment. Finally, "complementary currencies" are designed for economic purposes (such as protecting the local economy). Blanc (2011, p. 6) makes clear that "two cases should definitely be removed from an analysis of CCs": national currencies and for-profit currencies established by firms. He justifies this exclusion by emphasizing that "sovereignty, as well as profit motives, do not respect what can be considered a series of major distinctive features of CCs: they are designed and implemented mostly by civil society, mostly locally and grassroots, and mostly in a democratic way" (Blanc, 2011, p. 6).

3. CLASSIFYING CURRENCIES: NEW FOUNDATIONS

The previous section reviewed several attempts to build coherent classifications. These attempts have been successful in at least two ways. On the one hand, complex classifications, such as the one of Bech and Garratt (2017), have brought clarity and insight into the extremely diverse world of money. On the other hand, classifications targeting a sub-set of currencies, such as those of Blanc, have rightly pointed out some key facts about complementary currencies: their diverse purposes, their relations to the public sphere and the sphere of commerce, and their slow evolution throughout history.

This paper aims at complementing these approaches in one specific way: finding a classification that would be able to account adequately for the ethical issues that new kinds of currencies are raising. These include the legitimate use of the state's coercive power over money, the just balance of citizens' involvement in the regulation of money and the possible limits to money's purchasing power, among others (North, 2007; Lietaer et al., 2012). That classification is not aimed at replacing previous ones. Rather, its aim is supplement them by providing a guide to normative inquiry. In this section, I will argue that a classification will satisfy that aim if it can show, for every possible type of currencies, and as unambiguously as possible, to which side of these controversies it lies.

Most existing classifications have a different purpose (i.e. providing a suitable background for evaluating the impact of these currencies). And few of them allow to account for normative issues in a satisfactory manner. Let me take the example of the political legitimacy of monetary policy. Classifications relying on generations do make clear which types of currencies were most wide-spread at different times (or locations) (Blanc, 2007; Seyfang and Longhurst, 2013; Michel and Hudon, 2015). However, they do not allow to differentiate currencies according to how democratic decisions regarding monetary policy are; or to how money ought to be created and circulated.

Similarly, Blanc's more recent attempts, while they provide important insights on the nature of complementary currencies, are unfortunately equally unable to help us for normative inquiry. Blanc delineates three spheres to which a currency can belong: the public sphere, the market sphere and the civic sphere. Which sphere is more legitimate? This is not Blanc's purpose to answer this question: his categories rather relate to the nature of the spheres in which certain currencies circulate, not to the legitimacy of each sphere, or currency. His categories do prove useful for positive inquiry. However, if one wants to ask the question of the legitimacy of money, one would need other classifications.

This section discusses three prerequisites that will greatly help to build such a classification. First, any classification should make explicit the moral values that underlie each currency, or the project behind each currency. The literature and the world of alternative currencies is pervaded by ethical and philosophical issues. Different conceptions of how money should be created or regulated are opposed to each other and would need to be dealt with in a clear and transparent way. Second, we need an exhaustive classification that can apply to the entire set of all possible currencies. That set constitutes what Hodgson (2019, p. 211) calls a "population", that is "social phenomena that exhibit some degree of communality and some degree of diversity". As we have seen in the introduction, currencies are social constructs that count as means of exchange within a given community. They nevertheless differ in important respects, which create a need for classification. Any currency (that is, any item in the set) should be able to find a place within the classification, for one cannot evaluate them normatively if one does not know how they differ. Third, the classification should, as far as possible, delineate unambiguous differences between different types of currencies. Even if finding crystal-clear delineating criteria might be impossible, clear definitions are an essential part of any normative inquiry.

(1) First, a classification should make moral values explicit. The literature provides many examples of (usually positive) normative statements on alternative currencies. Thomas Greco, for instance, insists first on the "symptoms of disease" of the current monetary system (Greco, 2001, p. 4) and on the "disintegration of local economies" (Greco, 2001, p. 34) before introducing all the "fundamental advantages of distinguish[ing] community currencies or mutual credit systems" (Greco, 2001, p. 51). According to Greco, these currencies are able to localize the economy and to rebuild local communities. The framework of Lietaer et al. (2012) is basically the same. The first chapters of the book highlight the actual difficulties with conventional money (Ch. III-VI); then, the last three chapters (VII-IX) invoke alternative currencies as wholly beneficial solutions, especially with regard to local exchanges and community building. Finally, Jean-Michel Servet and his co-authors (1999) call Local Exchange Trading System (LETS) a "good money" which generates a "good economy" (Servet et al., 1999, p. 174). According to them, LETS's main quality is its ability to foster "good" social relations.

These tendencies have had a certain performative effect on the public debate, so that many identify alternative currencies as "good" money and official currencies as "bad" money[iii]. However, despite this abundance of normative statements, most authors do not always clearly put forward the normative principles they seem to support. For instance, Servet and his co-authors (1999) do not delineate precisely the nature of the "good" economy or the "warm" social relations they are praising. This might not be a problem for a literature that focuses on describing the nature or the function of such currencies (Place and Bindewald, 2015). Comparatively, normative inquiry has not received the same level of attention. However, the fact that normative questions impregnate the literature creates an urgent need for clarification of the underlying moral values. This paper wishes to contribute to fulfilling that need.

(2) Second, we need exhaustive classifications that apply to the entire set of all currencies and that show how one particular type of currency differs from all other possible types (Hodgson, 2019). Actually, many authors do not intend to include all currencies into their classifications. For instance, classifications based on generations ignore many types of currencies that do circulate alongside official currencies (virtual currencies and commercial currencies, among others) because their aim is to focus on specific types of currencies (Blanc, 2011). Similarly, Seyfang and Longhurst (2013) and Dittmer (2013) focus on specific complementary currencies in order to evaluate their environmental impact. Selecting specific currencies for one's classifications may be justified when it comes to evaluating the impact of a sub-set of the monetary system on several variables (Place and Bindewald, 2015). However, this is a problem for a classification that aims at guiding normative inquiry, for at least two reasons.

First, it is hard to see how currencies differ (and, especially, how they differ from the euro or the dollar) if some are not included into one's classification. Second, lack of exhaustiveness may lead to ignore the common characteristics and, possibly, the common drawbacks and benefits, of similar currencies. To illustrate these two points, let me take the example of local currencies and of Bitcoin, which, at first sight, may appear at odds with each other.

Bitcoin is a digital currency that is managed on a decentralised basis by (anonymous) users and protected by a set of cryptographic protocols. Sometimes coined a "libertarian dream" (De Filippi, 2014), it has however much in common with other kinds of alternative currencies. Both bitcoins and local currencies may escape government's control. Both give users the possibility to intervene in the creation of money. Moreover, Bitcoin is experiencing many troubles that may well hit other kinds of currencies. It is not exempt from fraud and legal issues (Gruber, 2013), which may also be acknowledged by supposedly "cleaner" currencies. As for Bitcoin, local currencies' supporters may be tempted by tax evasion. For instance, Minuto, a defunct Belgian local currency, was praised by its promoters because it was exempt from taxation (Réseau Minuto, 2016). Comparing Bitcoin and Local Currencies could, therefore, reveal some relevant facts or ideas concerning those legal issues. One could lose an opportunity for new insights by ignoring their similarities.

(3) Third, classifications need to draw precise distinctions between currencies. Ideally, they should point at unambiguous differences between them. Unfortunately, many separating criteria often turn out to be unable to delineate precisely what distinguishes alternative and official, national, currencies. Blanc, for instance, argues repeatedly that only "democratic" and "grassroots" currencies should count as "civic" currencies (Blanc, 2007, pp. 38–39, 2011, p. 6, 2013, pp. 261–262). He stresses the importance of the role of "civil society" in the definition of such currencies. He opposes these currencies to those belonging to the state's sphere (which he calls "public" currencies) and to those belonging to the commercial sphere ("for-profit" currencies). However, some private for-profit currencies such as the WIR have a grassroots and democratic character. What counts as "democratic" and "grassroots" is, after all, subject to various interpretations. The WIR may be seen as an example of a grassroots currency, created by small and medium enterprises. This Swiss currency works as a complement to the Swiss Franc (Stodder, 2009). It allows small and medium enterprises to exchange with each other and to get loans from the WIR Bank. Clearly, the WIR, while grassroots and local, is also for-profit. Its purpose is to increase trade and investment opportunities for Swiss companies. In which category should it be included? The "democratic" and "grassroots" character of CC's does not provide a clear answer to this question. We would need an additional criterion to distinguish between different kinds of currencies.

Classifications relying on the stated purpose of each currency provide a further example of this problem. As we have seen, many authors separate alternative currencies from official currencies on the basis of the "social", "non-profit" or "environmental" purposes the former are supposed to pursue (Blanc, 2007, 2011; Lietaer and Kennedy, 2008; Place and Bindewald, 2015; Tichit et al., 2016). It is undeniable that these various purposes constitute a large part of the attractiveness of these currencies, which may explain their central importance in the literature. As Blanc and Fare (2016, p. 5) argue: "specific values constitute, in fact, the raison d'être of local currency schemes". Each is linked, according to Blanc (2018a, p. 4), to a specific ethical project. Unfortunately, though, these purposes do not draw a clear-cut distinction between currencies. First, "promoting" certain values is different from effectively realizing these values. A currency designed to promote "warmer" social relations or "greener" exchanges may fail to do so (Michel and Hudon, 2015). A "stated" purpose is not a "realised" purpose. Second, most currencies have numerous stated purposes, so that they can fall in numerous different categories. Third, and most importantly, the euro and the dollar are also effective tools for improving social relations or empowering poor and marginal people. After all, transfers in euro finance our health care system, our social security system, our schools and universities. All these schemes clearly constitute important drivers of social cohesion. Even if this is not its stated purpose, should not we consider, therefore, that the euro is a "social" currency? National currencies, too, can have social purposes. They are not univocal drivers of market values. Fourth, the creation of the euro had several purposes. According to the Delors Report for the European Council (1989), these objectives included enhancing European cohesion, improving monetary policy coordination and increasing monetary stability. The euro, in other words, is supported by an "ethical project" (whether or not this project is a success is open to doubts, of course).

This clearly shows that purposes and objectives cannot be the separating criterion between official and alternative currencies. One currency can find its place within several categories, while euros and dollars might become indistinguishable from alternative currencies. If the aim of such classifications is to find a criterion that differentiates alternative currencies from the euro, and from each other, using their stated purpose as a criterion appears quite unhelpful. We need to find other criteria that allow for finer-grained distinctions.

4. HOW CURRENCIES DIFFER: A PROPOSAL

How do these principles affect the classification of currencies in practice? This section offers a proposal satisfying these prerequisites and studies three distinctions, which, as we shall see, relate to important normative issues. First, there is a clear difference between currencies that are legal tender and those that are not (section 4.1). The second distinction lies between currencies whose creation and circulation is handled under the control of users and those which are not (section 4.2). Finally, currencies that may serve as a universal means of payment are distinguished from those whose use is limited to a certain domain (section 4.3). As we shall see, each distinction relates to one normative issue and divides the entire set of all possible currencies into two subsets. These distinctions create ideal-types, which may not account for all the subtle details of reality, but which delineate relevant conceptual differences between currencies and provide important insights regarding monetary policy.

Some of these distinctions are similar to previous proposals. My purpose is to refine them and to make the criteria that distinguish currencies more explicit. Moreover, the door is left open for more distinctions. As Blanc (2011, p. 5) writes, "a typology should be opened enough to let innovations develop: a given typology cannot claim to be the only relevant one, and it might be permanently discussed and transformed." This study is far from complete, but provides a general conceptual framework, able to give precise guidelines for building relevant distinctions, and flexible enough to be "adapted and transformed".

4.1. Official versus Alternative Currencies

A first distinction can be made between currencies which are defined as a legal tender in at least one country, and those which are not. According to the Oxford English Dictionary (2018), a legal tender is defined as all means of payment "which a creditor is bound by law to accept when tendered in payment of a debt". The US Code definition adds that these means of payments should be accepted "for all debts, public charges, taxes, and dues"[iv]. This first distinction sets official currencies apart from alternative currencies.

Though it may seem overly simple, this distinction is essential to understanding alternative monetary proposals, as it emphasises a crucial difference in legal regimes for different kinds of currencies: are people forced to accept a currency in payment, or not? In short, this distinction raises the question of the legitimacy of the legal tender, that is, the question of whether (or not) the state is right to impose a legal tender on people. The state has a special status, compared to other political or economic agents: it has the monopoly on coercive power. It is the only agent that is authorized by law to coerce people into doing certain things (for instance, using a certain currency). This is why official currencies are special: the state can oblige its citizens to accept them in payment.

Within the literature on alternative currencies, most authors generally consider that the use of alternative currencies is and should remain voluntary, without threatening the dominance of official currencies (e.g. Blanc, 2018a). Others are more radical and call for the abandonment of all legal tenders. Hayek (1990), for instance, proposed to deregulate the banking and financial systems and to allow private actors to emit their own currencies. Finally, in stark opposition to Hayek, some authors, known as "modern monetary theorists", in the continuity of the work of Knapp (1921), stressed the importance of having a coercive state to impose a currency over a political territory (e.g. Wray 2012). In connection with this debate, the first distinction differentiates currencies according to whether a political authority (a state, a king, a city council) uses its coercive power to enforce the use of a currency, or not.

The euro and the dollar are obvious examples of official currencies. The euro is legal tender in the EU (see EC Treaty, art. 128) while the dollar is legal tender in the US (see US Code, 31, §5103) as well as in other countries, such as Ecuador. Alternative currencies, on the other hand, include all the means of payments that are not considered as a legal tender in at least one country. This means that vendors or tax authorities are not bound to accept them in payment. In this category, I include Local Exchange Trading Systems (LETS), Local Currencies (such as the Bristol

Pound), Carbon Currencies (aimed at reducing carbon emissions), regional Currencies (valid only in a given region), digital and cryptocurrencies (such as Bitcoin), commercial currencies (Air Miles), Meal vouchers, and the likes.

Alternative currencies may have several types of relations with official currencies. Blanc (2017) has proposed a complex description of how currencies relate to each other. The present discussion is more modest and limits itself to the following concepts: first, some alternative currencies may be converted into official currencies and others may not. Bitcoins, for instance, may be exchanged for euros or dollars, while most Local Exchange Trading Systems forbid this possibility. The value of Bitcoins is constantly fluctuating compared to the dollar or the euro. However, in some cases, the value of alternative currencies is anchored to the value of the euro or the dollar. For instance, the value of one unit of local currency (e.g. Bristol Pound) is generally equivalent to the value of one euro. In fact, we could build a continuum of alternative currencies, depending on how easily we could exchange them for official currencies.

Second, alternative currencies may compete or be complementary to official currencies. A currency is said to complement another when it does not aim at replacing it as the main unit of account and means of payment in a given economy (and conversely for competition). Most alternative currencies do not compete with official currencies, that is, they do not try to replace them (Pfajfar, Sgro and Wagner, 2012). Local currencies, for instance, are a means of exchange as well as a unit of account valid only in a definite area. Usually, they are acceptable in exchange for goods and services produced in that area only. The Bristol Pound, a Local currency in the city of Bristol, does not aim at replacing the Sterling Pound as the official unit of account and means of exchange in the United Kingdom. As Bristol Pound's official website explains: "The Bristol Pound is a complementary currency, designed to work alongside sterling, not replace it" (Bristol Pound, 2015). But alternative currencies sometimes take the place of official currencies (or a large portion of that space), especially in periods of crisis. In Argentina, for instance, regional and local currencies came to play a great role during the financial crisis of 1999-2003 (Gómez, 2009).

4.2. Participatory versus Non-Participatory Currencies

This section deals with the issue of monetary policy, which has raised intense debates in recent years, most notably after the 2007 financial crisis (Turner, 2016). Who should have the power over monetary policy? Should monetary policy be independent of the political realm, or regulated through it? Finding a precise criterion that takes into account the "political" dimension of money is not an easy task. In this section, I propose to differentiate currencies according to whether users can be involved in their management. Participatory currencies give the possibility to all users to take part in their management, while non-participatory currencies forbid this possibility. That involvement varies in degree. Some participatory currencies give more power to their users than others. Some currencies are strongly participatory while others exhibit a lower rate of participation. The strength of participation should be evaluated on a one-to-one basis, as it differs for every participatory currency (I will study two examples below[v]). Users' involvement may also concern different types of decisions, for instance regarding the issuance, circulation, or distribution of participatory currencies. On the contrary, non-participatory currencies keep users away from their governance: the degree of involvement is equal to zero.

The examples of LETS and Bitcoin will help us understand how different participatory currencies exhibit different levels of participation. LETS are managed by the association of all users. Even if some LETS do possess a committee in charge of the daily management of the system, it is usually accountable to all users (Servet et al., 1999). However, most often, such authorities do not exist, and the management of participatory currencies is open to all users. Bitcoin, for instance, is a participatory currency without any central management. The system operates as a peer-to-peer network on a decentralised basis, and each user can participate in its creation and in the control of its operations.

These examples help us to refine the definition of participatory currencies. First, for a currency to count as participatory, the possibility to participate must be open to all users. But users need not use that possibility. For instance, most Bitcoin users do not participate in its development, but they could do so if they wanted to. Moreover, users' participation may take various forms. In LETS, users take part in the training of new members or in the resolution of conflicts between members. Similarly, Bitcoin users can participate in the development of the protocol, or in the creation process (mining). What matters is that participation concerns the management of the currency (its creation, its value, its area of validity, etc.). Finally, the decision process is necessarily a collective process. Participatory currencies give to all users the possibility to participate, and this involves necessarily a form of collective decision making. If a currency gives the opportunity to participate only to banks, or only to bureaucrats, this cannot be a participatory currency. Of course, some participatory currencies have a board of directors (Local currencies, LETS). Others do not have any central governance process (e.g. Bitcoin). However, for a currency to count as participatory, its board of directors (if it exists) must always be subordinated to the effective control of actual users, which have together the power to alter such central institutions and to take part in the management of the currency.

On the contrary, the management of non-participatory currencies does not involve users. All forms of participation are excluded. The euro and the dollar, for instance, are managed by a central bank (the European Central Bank and the Federal Reserve, respectively) which is formally independent from states and citizens. The design of monetary policy and decisions about the creation process does not involve European or American peoples. Even if national governments select the members of the governing council of their central banks, the latter remain independent from political interference (Dietsch, Claveau, and Fontan 2018, chap. 1). Similarly, firms retain control over the management of commercial currencies. Customers do not have a say over the way they are issued and circulated. Such currencies fall therefore in the category of non-participatory currencies.

Participatory and alternative currencies have much in common. The same distinctions apply to both: participatory currencies may (or may not) be converted into non-participatory currencies, and participatory currencies may (or may not) compete with non-participatory currencies. However, even if most alternative currencies are also participatory currencies, this is not always true. For instance, proposals of carbon currencies that would rely on State agencies are alternative and non-participatory currencies (Seyfang, 2009). Similarly, not all non-participatory currencies are official currencies. A currency can be managed at the level of the State or of another user-independent authority, without being legal tender. Air Miles, for instance, are neither participatory nor official currencies. They are managed by airline companies, not by passengers. Meal vouchers are also a good example: they are circulated by private companies, not by workers.

4.3. Universal versus Bounded Currencies

Universal and bounded currencies constitute the fifth and sixth categories. Bounded currencies are currencies whose possible uses are limited according to some geographic area (i.e., they are valid only for goods produced locally) or to communitarian criteria (i.e., they are valid only for exchanges between members of a community), or to specific goods or services (e.g. Meal vouchers and Air Miles). The relevance of this definition springs from the fact that these limitations are at the core of the arguments in favour of these currencies. These limitations are supposed to bring about certain benefits, in line with certain purposes. For instance, because they circulate only locally, local currencies are supposed to generate a healthier economy and stronger local communities (Curtis, 2003; Gregory, 2009). Similarly, LETS are designed to reinforce solidarity between members (Seyfang, 2002). In a different vein, the restrictive nature of Air Miles, which can only buy products of a specific airline company, is meant to retain loyal customers and constitutes one important instrument of airlines' marketing strategy.

Contrary to bounded currencies, universal currencies can, in principle, buy virtually all goods and services available on any market (legal or illegal), without any intentional limitations nor predefined purposes. Nothing prevents their user from buying a specific good. Nothing encourages them to buy specific types of goods and services either. Of course, there might be some contingent limitations, such as vending machines refusing payments in notes. Even if specific means of payment labelled in dollar or euro might not be accepted everywhere, this does not challenge the universal status of the euro or the dollar as a currency.

One could object that all currencies are bounded in a certain way. In particular, all are circumscribed to a certain geographic area (the euro in the Eurozone, for example). Benjamin Cohen, for instance, has argued that only the dollar can be currently considered as a truly universal currency since its "use dominates most if not all cross-border purposes" (Cohen, 2004, p. 14). However, my criterion does not assess whether a currency is currently universal, but whether it could potentially, in principle, be universal. The moon is currently not for sale, but if it were, one could use universal currencies to buy it. In fact, borders are not the issue here: the euro does not prevent Europeans from buying foreign goods. In this sense, the euro is a universal currency, that is, a currency with which one can possibly buy everything that is for sale, and which does not experience any intentional restrictions.

Note, moreover, that this distinction is different from Polanyi's famous concepts of all-purpose and special-purpose money (Polanyi, 1957, pp. 264–266). Polanyi is differentiating currencies according to the three traditional functions of money (means of exchange, store of value, unit of account). He shows that, historically, some kinds of money – which he calls special-purpose money – have served only one of these uses. For instance, some were only used as units of account, but could not be used as means of payments. Polanyi gives the example of the Assyrian and Babylonian accounting system, which did not rely on money conceived as a means of payment, but only as an accounting mechanism (Polanyi, 1957, p. 265). On the contrary, all-purpose money is suited to all functions[vi]. My distinction, however, does not consider what functions a currency may fulfil but rather whether geographic or communitarian criteria restricts its possible uses.

The obvious examples of universal currencies are the euro, the dollar, and other national currencies. LETS, Local currencies, the WIR, Meal vouchers and commercial currencies are all examples of bounded currencies. The purchasing power of local currencies is bounded according to some geographic area (the territory of a town). LETS, the WIR, and Time Banks are valid only within a specific community of users. And Air Miles and Meal Vouchers can only buy specific goods. It is important to notice that, in all cases, these limitations are justified on the basis that they could impact the economy or the environment in a beneficial way. For instance, LETS, Time banks and Local currencies are usually put forward as agents of social integration (Servet et al., 1999; Oliver Sanz, 2016). According to their promoters, these currencies may also exhibit some economic benefits for local or regional economies (Williams, 1996; Gregory, 2009). Others think they may play an important role in a sustainable economy (Curtis, 2003; Lietaer et al., 2012). Some bounded currencies also play a role in the design of redistributive policies in many countries. For instance, Meal vouchers, which give access to a limited basket of goods, form an important part of poor relief policies in the US (Currie and Gahvari, 2008). Finally, commercial currencies, such as Air Miles, are part of the firms' marketing strategy.

Many participatory and alternative currencies are also bounded currencies, but not all are. Local Currencies, for instance, are alternative, participatory and bounded currencies. They are valid only as a means of exchange for specific goods and services in a specific area. Bitcoin, on the contrary, is not a bounded currency, even if it constitutes an alternative and participatory currency (Kaplanov, 2012, pp. 141–143). Clearly, Bitcoin is not a legal tender and is, therefore, an alternative currency. Moreover, users can participate in its creation. It is, therefore, a participatory currency. However, Bitcoin is not a bounded currency. One could potentially buy any sorts of goods or services using Bitcoins. Bitcoin can potentially be a universal means of payment and its uses are not limited in any way. Of course, Bitcoin, in practice, cannot buy everything. Only a few companies accept it in payment for goods and services. However, this is not a consequence of Bitcoin's architecture or purpose, but a result of its lack of acceptability. Bitcoin, therefore, retains its universal character because, in theory at least, it allows people to buy anything that is for sale.

Finally, an important issue concerns the extent to which bounded currencies can be converted into universal currencies. Meal vouchers, Air Miles and most LETS and Time Banks currencies simply cannot be exchanged for universal currencies, while many local currencies can, but at some cost, which restrains their convertibility. Within the category of bounded currencies, we could, therefore, think of a continuum of currencies, where the place of each currency on the continuum would depend on its capacity to be converted into universal money.

4.4. Summary

The previous sections highlighted three distinctions. The first lies between currencies which are legal tender (official currencies) and those which are not (alternative currencies). The second separates currencies whose management is under the control of users (participatory currencies) from those whose management is independent of users (non-participatory currencies). Finally, the third distinction draws a line between currencies that are universal means of payments, which can buy any sorts of goods and services (universal currencies), and currencies whose use and validity are limited according to certain precise criteria (bounded currencies).

The table below gives examples of currencies classified according to the second and the last distinctions. The first distinction is the most obvious and does not need clarifications. As we have seen in §4.2 above, the strength of participation often differs from one participatory currency to another. Different LETS and different local currencies may be managed differently and might give different levels of powers to their users. Table 1 below does not account for these differences, as every single currency would probably need its own cell.

Table 1. A comparison of different currencies

	Non-participatory	Participatory
Universal	Euro Dollar	Bitcoin
Bounded	Meal Vouchers Air Miles Carbon Currencies	LETS Local Currencies WIR

As I showed earlier, the authority is the ECB for the euro, the FED for the dollar, Voucher and Airlines companies for Meal vouchers and Air Miles, and State agencies in the case of carbon currencies. The euro, the dollar and Bitcoin are universal currencies, which may potentially buy everything, whereas the others are bounded according to some criteria. Meal vouchers and Air Miles are limited to particular goods provided by specific companies (Meals and Airlines tickets). Carbon currencies are limited to goods beneficial in some degree to the environment. LETS and Local currencies are both limited to a certain area or a certain community of users. The validity of the WIR is limited to the goods and services produced by Swiss SME's which belong to the scheme, and each member (or "cooperator") is entitled to one vote in the WIR general assembly and has the right to stand for election to the board of directors (WIR Bank, 2018).

The above distinctions satisfy the criteria that I defended in section 3. Clearly, all currencies (including the euro and the dollar) can find a place in this table. Each distinction relies on one explicit criterion, which divides the entire set of currencies into two mutually exclusive subsets and allows to see clearly how currencies differ from each other, and especially from the euro and the dollar. Moreover, each category is defined as precisely and unambiguously as possible, even if there might remain some grey areas and small exceptions to the general rule. Finally, this classification creates a basis for the discussion of complex normative issues related to alternative currencies.

The first distinction relates to the problem of determining the legitimate use of the state's coercive power. This is a very old question in political theory, which has recently been raised by Raz (1986) and Rawls (2005), among others. According to Rawls' influential account of legitimacy, an authority is legitimate if its coercive political power is justified by reasons that people can reasonably accept. Regarding our present inquiry, the problem concerns the extent to which the state can legitimately compel people to accept one or several currencies in payment (i.e. legal tenders). Hence, the first distinction separates currencies that are legal tenders from those that are not.

The second distinction relates to the issue of who, or which institution(s), should have the power over monetary policy. Should the people be involved in monetary policy decisions? Through which participatory process? Or, on the contrary, should central banks be absolutely independent of all political interferences? Recent years have witnessed increased debates on the possibility and desirability of citizens' involvement in monetary issues (Dietsch, Claveau and Fontan, 2018). Defining precisely the role of an agent in the creation and management of money is a difficult issue. The second distinction is an attempt in that direction. It differentiates currencies according to whether users can take part in their management. It aims to provide a clear guide for deciding which kind of currency to support if one cares about citizen's participation.

Finally, in relation with the third criterion developed in this article, one could wonder whether money's possible uses should be restricted according to some geographic or communitarian criteria, so as to bring about certain benefits. This question is crucial for currencies, such as LETS, regional or local currencies, which are only valid locally or within a specific community. For instance, local currencies are often praised for their alleged capacity to localize the economy and to strengthen communitarian ties, thanks to their uses being restricted locally (Curtis, 2003; Brooks, 2015). One could ask whether these claims are true, but could also investigate whether it is in line with justice. Should money's purchasing power be restricted locally, or within communitarian bonds, or to certain goods, in order to achieve certain objectives?

All these questions are of utmost importance. The above three distinctions allow to frame political issues in adequate terms, as unambiguously as possible, and to discuss adequate policy proposals based on the relevant differences between currencies. In that sense, they help set the ground for further ethical debates on these issues. Current research in financial ethics has focused on big institutions, such as central banks (Dietsch, Claveau, and Fontan 2018), or trendy issues, such as Bitcoin (Angel and McCabe, 2015; Lambrecht and Larue, 2018). However, few articles have focused on alternative currencies (for exceptions, see Mildenberger, 2019; Larue, 2019). This might be the subject of further research.

5. CONCLUSION

This article reviewed several ways of classifying currencies and studied some problems that frequently appear in this literature. It then introduced three distinctions, in an attempt to account in a satisfactory manner for the normative issues that these currencies are raising. Each distinction is connected to one normative question. Each allows seeing on which side of these debates each type of currency lies. The first separates currencies that are legal tender in a definite area from those which are not, and relates to the question of the use of coercive power by the state. The second separates currencies whose management is independent of users from those whose management rests in the hands of users. This second distinction relates to the issue of citizen's participation in monetary policy. The third separates currencies that, potentially, can buy anything from those whose uses are restrained according to geographic or communitarian criteria, or to some specific goods. That last distinction is linked to the question of whether money's purchasing power should be restricted according to some specific criteria.

The aim of these distinctions is to provide a classification of all currencies that maintains the possibility for precise, transparent and exhaustive comparisons, and which establishes the basis for a well-argued debate on the norms and values that influence the choice of a currency or the regulation of money. While these three distinctions certainly do not match this aim perfectly, they nevertheless constitute a conscious attempt in that direction. Determining clearly how a currency differ from another may improve the debates on what is the good or the right currency.

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ENDNOTES

i - The category of « alternative currencies" is used in other classifications by other authors, or in other contexts as a generic term. This should not be confused with the meaning it has here, i.e. a currency that is not legal tender.

ii - "Les monnaies à logique politique », « les monnaies à logique lucrative » and « les monnaies à logique citoyenne ». My translation.

iii - See for instance the movie "Demain" (Dion and Laurent, 2015) and the findings of Blanc and Fare (2016).

iv - Some countries have limited legal tender instruments: in Britain, for instance, the 50 pence piece is legal tender only for sums of up to 10 pounds sterling. These small exemptions do not threaten the more general rule that sterling pounds are official currency in the UK.

v - For a study of collective decision making in alternative currencies, see Meyer and Hudon (2017).

vi - See Blanc (2013), Kuroda (2008) and Servet (1993, 2007), for a contemporary reconsideration of Polanyi's ideas on all-purpose and special-purpose money.