SOCIAL REPRESENTATIONS OF MONEY: CONTRAST BETWEEN CITIZENS AND LOCAL COMPLEMENTARY CURRENCY MEMBERS

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ABSTRACT

This article analyses the social representations of money from survey data. More specifically, it tests how organizers of a complementary currency system have a distinct perception of money compared to other citizens. The main results confirm the existence of significant differences between the two groups. The structure of their representations shows that for the local currency members money is less tied to official institutions, to the symbol of the sovereign State, to labour and to wages than for the representative population segment. This confirms a number of theoretical studies that see these social innovations as forms of protest against the standard system, questioning the sovereign State currency and close to the concept of unconditional income. Local currencies, through the different social representations of money they contain, could well be drivers of societal change.

KEYWORDS

Social representations of money, Survey data, Abric method, Complementary currencies.

JEL CODES

E42, Z13.

PSYCINFO CODES

2910, 3000.

1. INTRODUCTION

Since 2010, about 40 complementary local currencies have been put into circulation in France, such as the abeille in Villeneuve-sur-Lot and the occitan in Peyzenas, and a further about 30 are currently being finalised. These represent not-for-profit projects intended to revitalise the local economy, favour short distribution channels and other environmentally friendly practices, combat speculation and support solidarity-based projects and investments. They mainly develop out of civic associations and are tied to the euro (users need to exchange one euro to procure one unit of the local currency). They can only be used within a clearly defined area (usually a department or part thereof) and within a network of service providers who meet the requirements of a charter of values based on the objectives associated with the currency. According to Blanc (2015), these projects are positioned as representing a split from the current system and thereby constitute forms of protest. Menard (2002) suggests that these initiatives reject the historic model of the State currency, which they contrast with monetary localism. Similarly, Guyomart (2013: 51) describes these projects as examples of "subsidiary sovereignty": "Complementary local currencies seize upon 'local' aspects and diversify the system of monetary emission as a complement to that of the sovereign State. They recompose the powers associated with currency and establish a heterotopia by creating alternatives economic spaces." Baronian and Vercellone (2015) also draw a parallel between what they call "money of the common" and the minimum social income, thereby comparing currencies with a social vocation to movements designed to provide an unconditional income independent of employment.

Complementary local currencies are therefore established as political projects with a view to transforming society through education, communication and the changing social practices that their usage and circulation can generate. To do this, they must succeed in modifying citizens' social representations of currency, which in turn can have an impact on their relationship with the traditional and dominant forms of commercial exchange. Because social representations constitute a functional vision of reality, they serve as "guides for action" (Abric, 1994: 15) and thereby help determine behaviours. According to Fare and Whitaker (2014), the local currency projects can act as vectors of change when it comes to social representations because they deconstruct the standard framework of values, offer experiences of new practices and lead to civic and participatory actions.

As defined by Moscovici as early as 1961 and by Jodelet (1989: 53), a social representation "[...] is a form of knowledge that is developed and shared socially, with a practical objective that contributes to the construction of a common reality for a given group". It can therefore be understood to have two components: content (information and attitudes) and the way this content is organised, i.e. its internal structure. So it is not only the content itself but also the arrangement of this content that must be studied. This structural definition of social representations gave rise to many methodological research studies, notably those of Abric (1989; 1994), whose primary contribution in this area was to develop the theory of the "central core" around which every representation is structured. This central core – or system – is the representation's fundamental element as it determines both its meaning and organizational structure. It includes a limited number of elements that constitute the shared consensual basis for the collective memory and systems of norms to which a group refers.

The central core has one essential property: it is the most stable element in the representation and ensures its long-term survival in a changing and evolving context. It is the element that will most resist change. Any modification of the central core results in the complete transformation of the representation. Alongside this core is the peripheral system, whose elements are also part of a hierarchical order as they may be more or less removed from the central core: when close, they play an important role in cementing the meaning of the representation; when further away, they illustrate, specify or justify this meaning in order to adapt the representation's core to its actual context (Abric, 2001a). Through these functions, the peripheral system covers the operational aspects of the representation and can be seen as the privileged locus of representational changes over time.

According to Moliner (2001), two main factors have an impact on the central core: social practices and communication. However, it is difficult to modify the central system, especially in the short term, and it would appear that only practices can achieve this (Flament, 2001, in Chapter 2, p. 50 of Abric's book, notes that "Despite our efforts, we have so far failed to find any trace of a modification of a social representation under the influence of ideological discourse; only social practices seem to have such an effect"). However, the discourses can have an impact on peripheral elements and therefore progressively effect change in representations.

Some research studies have focused on social representations of currency, a fundamental aspect of the way in which human societies are organised. Currency is an extremely complex (Capozza et al., 1995) and polymorphous phenomenon (Snelders et al., 1992), so much so that it is very difficult to identify its parameters and scope. According to Mitchell and Mickel (1999), from a standard economic perspective currency is a utilitarian, ordinary, impersonal and neutral possession, whereas for sociologists and psychologists it takes on emotional and signifying characteristics. Some studies that set out to reveal the symbolic meaning of money[i] have demonstrated that individuals tend to associate multiple meanings with it, including power, security and freedom, which are the most common. In their literature review, Capozza et al. (1992) suggest that currency is associated with four of the most important symbolic elements for human beings: accomplishment and recognition (Kirkcaldy and Furnham, 1993; Tang, 1992, 1993, 1995), status and the respect of others (Goldberg and Lewis, 1978), freedom and control (luxury of free time, autonomy and freedom of choice: Goldberg and Lewis, 1978; Parsons, 1967), and power and access to resources (Goldberg and Lewis, 1978; Parsons, 1967). Elsewhere, Capozza et al. (1995) studied the relationships between three concepts – money, wealth and poverty – within a sample of adults aged between 40 and 60, using free associations with these three inductive terms. One of their findings is that work, which is associated with negative feelings, is a factor that is positively correlated with money and creates a bridge between wealth and poverty. Studies conducted on French samples support this. Vergès (1992) shows that money is closely linked to work and comfort/well-being, while Minibas-Poussard (2003) suggests it is strongly related to power and the objectives people set themselves. Looking at payment methods, Snelders et al. (1992) also find that the items most often associated with currency are notes and coins, which symbolise its legal value and the force of the law.

As far as I am aware, few research studies have analysed the social representations of currency across different subsections of the population or the way they change over time. One recent research avenue is the study of homogenous groups with a view to analysing the social representations that stem from their shared vision. What is striking is that the initial literature on social representations, using increasingly refined methodologies, primarily focuses on sketching the parameters and structures of these representations and how they change over time (see in particular Flament, 2001). The work of Galand and Salès-Wuillemin (2009), Penz and Sinkovics (2013) and Valence and Roussiau (2014) adopt this approach. To my knowledge, when applied to the theme of currency, only Meier and Kirchler (1998) offer endogenous definitions of the profiles of Austrian respondents in terms of their attitudes towards the future introduction of the euro, while Koiv (2012) analyses the different representations of currency by Estonian students before, during and after the introduction of the euro.

This article therefore builds on these previous studies and offers a twofold contribution. The first is theoretical: it provides a comparative analysis between the inhabitants of a particular area and a particular population segment (participants in the local currency project). At the time of writing, there does not appear to be any other study of this type, making this research highly original. This involves testing the hypothesis of Moscovici and Hewstone (1983), according to which sharing specific representations determines the formation or accentuation of a group identity. If the initiators of a local currency project have a strong sense of identity built on their currency, we should observe splits between the perceptions among project members and those of the wider public. It is this postulate that I set out to study in this article, marking its first contribution.

The second contribution is methodological and relates to the composition of the sample. One of the limitations, as I see it, of current research into the social representations of currency (or money) using survey data is that the samples used are not constructed with rigorous methods which would allow the findings to be generalised to the wider population. This is because these samples are not representative (in most cases, for reasons of convenience which are easy to understand, the respondents are psychology students and participants rarely number as many as 300). Only Meier and Kirchler (1998), in their analysis of Austria, use a representative sub-population. I see this as a major bias in the literature and one that is overcome in this article using an analysis of social representations within a representative sample.

This study focuses on a survey conducted in November 2014 in France's Puy-de-Dôme department. In order to compare social representations among the wider public to those of users of a local currency, the sample was composed partly from representative citizens and residents in the department and partly from members of ADML63 (Association pour le Développement de monnaies locales dans le 63). This association was first established in May

2013 and, on 17 January 2015, began to circulate the department's first complementary local currency, known as the doume. So far, the association has no employees and receives no subsidies.

At the end of 2014, when the survey was conducted, the association had 100 members. This number increased fourfold when the currency was put into circulation in January 2015, and the association now has 856 members, a network of 196 service providers and 80,700 doumes in circulation, which, after almost two years in existence, places it above most other local currencies. According to a 2015 report by an inter-ministerial mission to study complementary local currencies and local exchange systems, in April 2014, out of 17 such currencies, the average number of users is 414, with 86 service providers and 26,139 units in circulation. However, these averages are pulled upwards by the eusko, the local Basque currency and the most rapidly expanding in France, which boasts 22 exchange counters, almost 500,000 units in circulation, 6 employees, 2,600 members and 85 service providers. So in terms of averages across the 17 local currencies, if we eliminate the eusko effect, we find that 50% of local currencies have fewer than 150 members, 55 service providers and 11,525 units in circulation. The report also specifies that 7 out of the 17 local currencies studied have fewer than 10,000 units in circulation. Compared to other currencies, the doume is therefore among the largest in terms of the number of members, service providers and units in circulation.

Nonetheless, the doume must manage to transform the representations of as many people as possible if it wants to achieve its ultimate objective of modifying how citizens consume, produce and sell. Analysis of the survey data sheds light on the divergences between the two groups in terms of their social representations, thereby revealing the main items that can potentially serve as vectors of change.

The article is divided into three sections: the first presents the methodologies used to analyse social representations and concludes with a description of the approach adopted; the second presents the survey; and the third offers a discussion and an interpretation of the results.

2. SOCIAL REPRESENTATIONS STUDY: METHODOLOGY

The study of social representations raises two methodological problems: that of collecting representations and that of analysing the data obtained (see Rateau et al., 2012 for a review of the literature). There are two main approaches when it comes to collecting the components of representation. The first is interrogative (interviews, questionnaires, inductive panels, monographs) and the second is associative, i.e. based on the spontaneous associations made by respondents in relation to an inductive word. According to Abric (2003b) and Moliner et al. (2002), the associative approach presents several advantages: it allows the researcher to produce data directly based on the expressions of individuals, it is quick to implement and analyse, and it is easy to use and understand. According to Dany, Urdapilleta and Monaco (2015), it is currently the methodology used most often in the structural analysis of social representations.

According to Flament and Rouquette (2003), there are different possibilities when it comes to using associative methods. Two main categories can be identified: non-constraints and semi-constraints which limit the production of words in quantitative (generally no more than 5 words are asked for) and/or qualitative terms (in this case certain types of words are targeted based on their lexical nature, or the semantic field for association is restricted). According to Dany et al. (2015), the method most often used is free association without constraint, which, due to the freedom with which respondents can express themselves, better accounts for the symbolic world which they associate with the theme being studied. In order to understand the structure of a representation, based on a central core and peripheral elements, the data analysis is based on a measurement of the rank and frequency of induced terms; this is known as "prototypical analysis" (Vergès, 1992). Frequency corresponds to the number of times a term is mentioned by individuals, while rank relates to the order in which terms are mentioned.

While one might think that the first induced terms are the most important, here, like Abric (2003c), it is argued that the essential elements may be more likely to emerge after a warm-up period, when a certain level of trust has been established and defence mechanisms among respondents have been attenuated. It is not therefore self-evident that spontaneous rank truly corresponds to the importance of a term in individuals' representations. This is why Abric (2003b, 2003c) proposes a new method which involves asking respondents themselves to retrospectively rank the words they have used in order of importance. This came to be referred to as the "order of im-

portance" technique, as distinct from "order of appearance". The former was therefore chosen to conduct this analysis of social representations of currency. Other techniques involving ranking in pairs, scales or "bundles" have been suggested to rank items provided by respondents (see Abric, 2001 and Seca, 2001 for a review), but these have the disadvantage of being highly complex and time-consuming when it comes to conducting the survey. For an overview of the available methodological options, see Doise, Clémence and Lorenzi-Cioldi (1992). Moreover, the structure of a representation studied with a prototypical analysis should also be confronted to tests with different methods, like those developed by Moliner (1989), Guimelli and Rouquette (1992), Moliner (1993), or Lo Monaco, Lheureux, Halimi-Falkowicz (2008) for example. Nevertheless, these methods are also time-consuming when it comes to conducting the survey. Because of the context of the survey, which is presented in the next section, it was unfortunately not possible to implement such tests.

In line with Abric (2003b, 2003c) and Dany et al. (2015), a simple analysis based on importance/frequency was therefore chosen. It is also worth noting that existing research studies of social representations show that they are largely influenced by social practices (Flament, 2001). Analysis of the effect of practices is generally done by comparing group proximity between two extremes: those who regularly practice something and those who do not, based on 3 criteria suggested by Abric (2001): level of practice, degree of knowledge and degree of involvement. This article clearly shares this research perspective, given that it endeavours to determine the extent to which belonging to a local currency influences social representations of currency among participants.

Lastly, if we assume that members of the association for the development of the local currency are citizens like any others, then it is possible to interpret the differences obtained in terms of the impact of association membership on the changes in social representations by adopting a dynamic perspective of changing social representations using the kind of experiment conducted by Flament (2001).

3. SURVEY

The questionnaire was created in collaboration with students on the DASS (law and administration in the health and social sectors) Masters programme at the school of law in the Université d'Auvergne, as part of the "survey technique" class. This questionnaire was developed as part of a broader project with support from the Conseil Régional d'Auvergne, and as part of a call for tenders for action research on social innovation. The objective is to help ADML63 establish a communication strategy and acquire impact and monitoring tools for its local currency (doume) project. The questionnaire includes 73 questions divided into 4 main sections: currency and the economy, currency usage, lifestyle and sociodemographic questions. The analysis contained in this article focuses primarily on the first questions in the first section.

The segment of the sample made up of citizens was composed using the quota method, in an effort to most closely represent the composition of the Puy-de-Dôme population by retaining the following criteria: gender, age, socio-professional category and urban/rural place of dwelling. The 33 students on the 2014/2015 Masters programme were asked to interview 12 people and endeavour to respect the proportions of the 4 criteria cited above. A total of 392 questionnaires could be used (4 had to be rejected because they were incomplete or contained errors). Implementation of the quota method meant that the students quite intensively used family members, friends, neighbours and indirect acquaintances in order to find people who matched the required criteria. However, some students not from the region and who therefore had less substantial networks issued the questionnaire to passers-by in the street or at the Jardin Lecoq, a park in the centre of Clermont-Ferrand. A small proportion of the questionnaires was completed by allowing the respondents to take away the forms where there were time constraints, schedule clashes or other difficulties. But the vast majority of them took place either face-to-face or by telephone. This was done in November 2014.

According to INSEE (2014)[ii] , based on the most recent census (2011), the population of Puy-de-Dôme is 635,469. The reference population was limited to people aged 18 to 80 in order to include only those with potential financial autonomy. Eliminating these two age categories meant a reference population of around 500,000. The table below presents the sample composition in respect of the proportions represented within Puy-de-Dôme:

Criteria	Sample	Puy-de-Dôme population
Number of people	392	500,000
Men/women	52% women	51% women
Rural/urban	26% rural	30% rural
Farmers	1.53%	1.40%
Artisans/traders	4.1%	3.65%
Managers	12.2%	8.20%
Intermediary professions	17.85%	14.30%
Employees	21.2%	17%
Workers	10.5%	13.83%
Inactive	17.86%	10.70%
Retired	20%	30.94%
18-24 years old	13.26%	12.80%
25-39 years old	26.53%	24.36%
40-54 years old	28.82%	27.57%
55-64 years old	16.32%	18.43%
Over 65 years old	17.1%	16.84%

Table 1. Comparative statistics: sample and parent population

We can see that with the quota method the proportions of the parent population are respected on the whole in terms of the 4 criteria taken into consideration, with the exception of retirees, who are less represented in the sample. The sample also slightly under-represents the rural population. But on the whole, the 392 respondents are representative of Puy-de-Dôme residents based on the four main criteria.

In respect of the group of local currency members, the questionnaire was issued electronically in November 2014 to all members with a response deadline of 3 weeks. 52 of the association's 100 members at the time provided complete responses, a response rate of just over 50%, which is slightly higher than the rate generally obtained in remotely conducted surveys (see in particular Penz and Sinkovics, 2013, who obtained a rate of 25%).

Given that this article focuses on a prototypical analysis of induced terms (Vergès, 1992), it is primarily based on the data obtained from the following question: "If I say 'currency', what words come to mind (maximum 8)?" Respondents were then asked: "Please rank these words in order of importance: the 1st, 2nd, 3rd most important for you, etc."

The items generated by the inductive term currency, as well as the ex-post rankings of importance produced by participants, made it possible to conduct an importance/frequency analysis in order to reveal the content of the representation and its structure for each participating group.

4. RESULTS AND DISCUSSION

Before analysing the social representations of currency in the two survey groups, Table 2 presents some general descriptive statistics:

	Non-members	Members	Total
Number of respondents	392	52	444
Number of words mentioned	1764	355	2119
Average number of words per respondent*	4.50	6.83	4.73
Number of distinct words	331	175	422
Percentage of distinct words	18.8	49.3	19.99
Number of hapaxes[iii]	198	126	260
Percentage of hapaxes compared to distinct words	59.81	72	61.61

Table 2. Descriptive statistics of items induced by the term currency

*The mean difference between the two groups is statistically significant to a risk threshold of less than 1%

The first observation is that local currency members produced more words, associating an average of more than six words to the inductive term currency, compared to fewer than five in the citizens group.

Word	Frequency	Word	Frequency
money (argent)	270	Payment (paiement)	26
Coins (pieces)	159	Power (pouvoir)	23
Exchange (échange)	137	Dough (sous)	18
euro	139	Work (travail)	18
Note (billet)	61	Currency (devise)	16
Economy (economie)	46	Wallet (portemonnaie)	16
Bank (banque)	45	cash (cash)	14
Purchase (achat)	44	Poverty (pauvreté)	14
Wealth (richesse)	38	Pay (payer)	14
dollar	33	Speculation (speculation)	14
franc	32	Gold (or)	13
Trade (commerce)	28	Consumption (consommation)	12
Value (valeur)	29	Dosh (fric)	11

| Expense (dépense) | 27 | Security (sécurité) | 11 |
| Cash (liquide) | 27 | Bartering (troc) | 11 |

Table 3. The 30 terms associated with currency most frequently mentioned by all participants[iv]

The frequency of words obtained is a standard reflection of Zipf's law, as can be seen from Figure 1 in the appendices. The first items have a high frequency, which then significantly decreases such that more than half of all terms appear only once. This means that an item appearing just 4 times in the entire corpus has a very high occurrence compared to more than half of the set of words.

The following table presents the frequency analysis for the two sub-populations and shows, based on a Chi-squared test (conducted using R.Temis), that both groups display specific word frequencies when compared to the overall frequency for the corpus as a whole.

	Overall frequency	Frequency among non-members	t value	Frequency among members	t value
money	270	252	5.1***	18	-5.1***
euro	139	133	4.5***	6	-4.5***
coins	159	149	3.9***	10	-3.9***
speculation	14	6	-3.2***	8	3.2***
local	4	0	-3.2***	4	3.2***
exchange	137	100	-3***	37	3***
expense	27	27	2.5***	0	-2.5***
gold	13	7	-2.2**	6	2.2**
distribution	4	1	-2.1**	3	2.1**
dollar	33	32	2.1**	1	-2.1**
poverty	14	8	-2.1**	6	2.1**
franc	32	31	2**	1	-2**

desinge	2	0	-1.9**	2	1.9**
doume	2	0	-1.9**	2	1.9**
fluidity	2	0	-1.9**	2	1.9**
givechange	2	0	-1.9**	2	1.9**
time	2	0	-1.9**	2	1.9**
buy	5	2	-1.8**	3	1.8**
market	5	2	-1.8**	3	1.8**
note	61	56	1.7**	5	-1.7**
cash	27	23	1.5*	1	-1.5*
finance	10	6	-1.5*	4	1.5*
injustice	3	1	-1.4*	2	1.4*
link	3	1	-1.4*	2	1.4*
tool	5	1	-1.4*	2	1.4*
poor	3	1	-1.4*	2	1.4*
bartering	11	7	-1.3*	4	1.3*
freedom	7	4	-1.3*	3	1.3*

Table 4. Group-specific terms with a 10% risk of error[v]

Note: *** indicates that the Chi2 statistic is significant with a 1% risk of error, ** a 5% risk and * 10%.

The results reveal that the items money, euro, coins, expenses, dollar, franc, note and cash are all over-represented in the citizens group. It is striking that these terms not only relate to standard liberal thinking in terms of the neutrality of currency but also to the symbol of State sovereignty (euro, dollar, franc, coins and note), in line with Snelders et al. (1992). In contrast, in the group of association members, these terms are under-represented, revealing that for them currency is much less linked to the sovereign State, in line with the perspective of Guyomart (2013). Similarly, the most significant items for currency holders are speculation, local and exchange. Looking at the other over-represented words in this group, we find poverty, debt, distribution, finance, barter and freedom. This shows that participants in the project associate the currency with social phenomena, thus departing from the idea that currency is neutral. This supports Blanc (2015), Menard (2002) and Guyomart (2013). These initial results clearly reflect the hypothesis of Moscovici and Hewston (1983), according to which a group is defined by shared social representations which, on this basis, are markers of group differentiation. The split between the two sub-populations therefore makes sense. From there, the prototypical analysis allows us to identify and compare the different elements that make up the two groups' social representations of currency. By combining the rank and frequency of the induced terms, this analysis attributes the elements potentially identified either to the central or peripheral system of these representations. This leads to a table with four boxes that depict the double representational structure and their interpretations, presented in appendices 2 (table 6).

The results obtained using this methodology, for each group, are presented in the appendices in Tables 7 and 8. These show that the central core of the representation of currency in the citizens group comprises 14 terms; in

the members group this figure is just 12. So even though on average members associated more words with currency than citizens, their central core is just as dense.

A systematic comparison was then carried out, looking for the presence or absence of shared words between the two groups in the different sections of their social representations of currency. An overview of this is provided in the table below:

Citizens	Members
1. Central words common to both groups' representations	
money, exchange, pay	
2. Words central to one group and completely absent from the other	
dosh, Banque de France, happiness	local, nothing for nothing
3. Words on the near periphery of one group and completely absent from the other	
expense, change, travel, country, Europe, inflation, investment, portfolio, abba, stock exchange, cheque, shopping, cost, yen	
4. Words central to one group and on the near periphery of the other	
coins, euro, payment, cash, security, work, salary, need	trade, power, consumption, bartering, freedom, finance, buy
5. Words on the near peripheries of both groups	
note, economy, bank, purchase, wealth, value, currency, wallet, cash, poverty, gold, speculation, savings, inequality, purchasing power, live, independence, means, tool, distribution, metal	

Table 5. Presence/absence of words shared by the social representations of both groups

The first section in Table 5 reveals that only three words are present in the central cores of both groups: money, exchange and pay. These terms essentially refer to the exchange function of currency. Of these three items, money was mentioned the most frequently. This is a more "concrete" term than currency and can, I believe, therefore potentially induce more feelings and opinions[vi]. So it is probable that the two sub-populations do not associate the same meaning or the same values with this item. A multiple choice question was therefore given to participants: "What essentially does money represent for you?" Respondents were asked to choose 2 words from the following list comprising 4 words with mostly positive connotations and 4 with mostly negative connotations:

- Fulfilment   - Power   - Security   - Success

- Injustice   - Harm   - Corruption   - Conflict

For 70% of respondents in the citizens group, money was associated with security, while 33% associated it with success. These mostly positive associations were only found among 42% and 4% respectively of members. This reinforces one of the findings of the prototypical analysis, which revealed that security is in the central core of the citizens' representation, but in the near periphery of that of the members group. Wealth and security are items regularly found in the results of the literature: Vergès (1992) found wealth to be in the central core and security in

the distant periphery; Minibas-Poussard (2003) found these two terms to be in a zone of ambiguity. In my results, wealth can also be located in the near periphery for both groups.

In contrast, 38% of the local currency holders associated money with injustice and 37% with corruption (compared to 17% and 18% respectively in the citizens group). These results suggest that ADML63 members have a much more negative opinion of money and therefore of currency since they associate it with much darker phenomena (corruption and injustice) than other citizens, who more closely link it to security and success. This is reinforced by the fact that, like Vergès (1992), we find happiness at the heart of the citizens' representation, a term that is completely absent from that of the members group. This also corroborates the findings of Kirkcaldy and Furnham (1993) and Tang (1992, 1993, 1995), who show that currency has a symbolic value of accomplishment and recognition, values that were also absent from the representations of ADML63 members. The presence of the term power in the central core of the members' representation is also in line with the findings of several studies, in particular Capozza et al. (1995), Minibas-Poussard (2003), Goldberg and Lewis (1978), Wernimont and Fitzpatrick (1972), Goldberg and Lewis (1978), Parsons (1967) and Vergès (1992).

The second and third sections of Table 7 presents the elements of the citizens group's central core and near periphery (2), which are completely absent from the representation of the other group. These include Banque de France, country, Europe, inflation, investment, portfolio, stock exchange and yen, all of which clearly relate to official State institutions. These results support Snelders et al. (1992), who found that the items most associated with the word currency were coins and notes, symbols of State sovereignty, and which are also found in the two groups in this study (coins and euro in the central core of the citizens group and near periphery of the members group, and note in the near peripheries of both groups). For ADML63 members, currency therefore seems to symbolise a sense of attachment to a nation and its institutions. In contrast, only the term local is completely absent from the social representation of non-member respondents, while it is at the heart of that of the local currency holders. So while currency continues to be a symbol of State sovereignty for citizens, it becomes a symbol of joint ownership for ADML63 members. This supports the findings of Menard (2002) and Guyomart (2013), who show that local currency initiatives challenge the State monopoly over monetary sovereignty and lend currency a dimension of proximity. According to Menard: "Contrary to the dream of monetary sovereignty controlled by and constituent of the State, the idea of local currency most often [...] addresses concerns of proximity" (2002: 12). For Guyomar: "Complementary local currencies seize upon 'local' aspects and diversify the system of monetary emission as a complement to that of the sovereign State" (2013: 51).

Similarly, it is interesting to note that among the central words of Puy-de-Dôme residents and those on the near periphery of ADML63 members' representation, we find work and salary[vii]. This supports a certain number of research studies. In Vergès (1992), work was found to be in the central core and salary in the ambiguous zone, while in Minibas-Poussard (2003) income/work was present in the zone of ambiguity. However, it is likely that the results depend in part on whether or not respondents are in employment. The sample was therefore divided into employed and unemployed respondents in order to compare the social representations of the two groups across the overall sample but also those of employed/unemployed members and employed/unemployed non-members.

In the two categories (employed/unemployed), across the entire sample, work is found in the central core. It would therefore appear that the difference is between members and non-members rather than between the employed and unemployed when it comes to the place of work in their representations of currency. In contrast, the distinction between employed and unemployed seems relevant for the item salary. For respondents in employment, it is central to their representation, but only appears on the distant periphery in the case of unemployed respondents. When a further subdivision between members and non-members is used, salary appears in the central core of non-members in employment, but in zone 3 for members in employment, which seems to reveal a particular difference. Similarly, for unemployed non-members, salary is in the distant periphery and is completely absent from the representation of unemployed members. It therefore emerges that salary and work lie more on the periphery of the representations of members than in the case of citizens, even when employment status is taken into account. If one supposes that at the outset members shared the same representation as citizens who were uninitiated to the local currency, then it is possible that the words work and salary, which initially belonged to the central core, shifted towards the periphery in the case of members. Members can therefore be said to have

somewhat dissociated work and salary from currency. This structural difference in a social representation can also be constituent of the group (Doise, 1985). This is a particularly interesting aspect given that complementary currency projects are close to the values of those who advocate for basic income levels (Bresson, 1984), universal dividends (Foucher, 2012), the relative theory of currency (Laborde, 2010) or the guaranteed social income (Monnier and Vercellone, 2007; Mylondo, 2010, 2011; Baronian and Vercellone, 2015). These are concepts designed to disconnect monetary means of survival from the need to work. Our results therefore show that for participants in the complementary currency project the items work and salary are of less central importance in their representation than in that of other citizens. This characteristic makes them potentially more likely to be sympathetic towards the values inherent in initiatives to provide a basic income.

The fourth section of Table 7 reveals that the terms trade, power, consumption, bartering, finance, freedom and buy[viii] are central to the social representation of members and on the near periphery (zones 2 or 3) of that of the citizens group. Referring to Abric (2001), and considering that the words in zones 2 and 3 are likely to cause a shift in social representations, the items bartering, finance and freedom can lead to changes in the social representations of the greatest number. And if we adopt a dynamic analytical approach like that of Flament (2001), then it is likely that those who placed the terms bartering, finance and freedom in their ambiguous zone can be encouraged to support the local currency (which identifies with the concept of bartering and advocates freedom) and/or change their social representations of currency.

Similarly, the final section in Table 6 lists the words that are common to zones 2 and 3 in each group. Of these, distribution and independence appear as values that are defended by local currencies, poverty and inequality as phenomena to which such currencies are sensitive, and speculation as an economic activity which they combat. This suggests that more intensive use of these words in the association's communication strategy could attract more people to the project, since they are also found in the social representations of the citizens group. The term speculation is particularly noteworthy. Even though this word appears to be specific to the members group (see Table 4), it lies only on the periphery of their social representation (in zone 2, i.e. highly frequent but of little importance). These are not contradictory findings, since the specificity analysis does not take into account importance but only frequency. Speculation is not at the centre of the social representations of local currency holders but rather in zone 2, as in the case of citizens. However, it is once again worth asking to what extent this term represents the same value for these two sub-groups. To address this, the study included a closed question with just one possible answer: "What do you think of speculation?"

- It's a good thing, it rewards risk-taking

- It is normal for each individual to seek profit

- Unfortunately, there is no alternative

- It's scandalous, there should be no such thing

87% of members gave the response, "It's scandalous, there should be no such thing", whereas 65% of citizens believe it is a "good thing" or "normal" or "there is no alternative", and only 33% consider it scandalous. So while speculation is an important item in the social representations of both groups, it is not seen in the same light.

5. CONCLUSION

This article makes a twofold contribution. First, it provides a study of social representations of currency among citizens based on a survey of a representative sample of residents in France's Puy-de-Dôme department and on a prototypical analysis (Vergès, 1992). It therefore builds on the tradition of structurally analysing social representations, which so far has paid little attention to monetary objects and has rarely used representative samples.

In the citizens group, the core of their representation of currency contains terms that essentially refer to official institutions (money, coin, euro, Banque de France) and to the functions of currency (trade, payment and pay). These items are also symbolic of State power and official institutions. These results support those of Snelders et al. (1992). It would therefore appear that standard economic thinking, which presents currency as a neutral veil and as a symbol of State sovereignty, has been widely adopted by civil society. The presence of the terms security,

happiness, need and work in the central core of this group's representation is also a standard finding in the literature (see in particular Vergès, 1992 and Minibas-Poussard, 2003).

Second, the article studies the extent to which members of ADML63 who carry the complementary local currency (doume) perceive it in a way that is distinct from the wider public. The results obtained revealed a certain number of perceptions specific to the group and support previous theoretical research on the values and beliefs underpinning complementary currency initiatives.

Three salient facts emerge in particular. The first is that members mention many more words with symbolic content or which express certain values (e.g. speculation, distribution, poverty, freedom and injustice) when compared to other citizens. They also have more negative opinions of money, which they more widely associated with injustice and corruption; the same is true of speculation, which they see as scandalous, while most respondents in the citizens group see it as a "good thing", "normal" or that "there is no alternative". This is in line with the findings of Blanc (2015), who showed that local currencies are a form of protest against the standard system. Furthermore, the term local is central to the representation of members, while items symbolising attachment to the nation and its institutions (e.g. Banque de France, country, Europe, inflation and stock exchange) – central to the representation of citizens – are completely absent. Similarly, coins and euro are found in the central core of the citizens group's representation, but only on the near periphery in the case of local currency holders. This supports Menard (2002) and Guyomart (2013), who argue that local currency initiatives challenge the State monopoly over monetary sovereignty and lend currency a dimension of proximity.

Finally, the results of this study show that for participants in the local currency project the items work and salary lie on the periphery of their representation, while the same terms are found in the core of that of the citizens group. This appears to suggest that members somewhat disconnect currency from the fact of having a job, thus aligning them with advocates of a basic income, as suggested by Mylondo (2010, 2011) and Baronian and Vercellone (2015).

The challenge facing local currencies is how to ensure that the wider public will gradually dissociate currency from its functions, from the symbols of the State and its official institutions, from success and happiness, from work and wages, begin to associate it with real economic and social phenomena and their "local" area, and develop a more critical view of the system. If we adopt the perspective of Flament (2001), for whom social practices have the greatest effect when it comes to changing social representations, then the challenge is to convince the greatest number possible to use the symbolic medium that is local currency. To do this, it would seem reasonable to begin with those citizens who are least removed from the values of local currency holders and ultimately extend these views to those most removed. But how can the distance between citizens and these values be measured and using which criteria?

The depth of our questionnaire, which includes 73 questions (opinions about the monetary, economic and financial system, consumption and saving practices, world vision and sociodemographic characteristics), should make it possible, in line with Galand and Wuillemin (2009), Penz and Sinkovics (2013) and Valence and Roussiau (2014), to sketch profiles based on specific characteristics and measure the distance separating ADML63 members from non-members. This will be the focus of a future article.

This contribution could provide socially innovative complementary local currencies with a new tool allowing them to appreciate the distance that separates them from other citizens and with indicators of their impact on how beliefs change and on perceptions of currency itself. As already pointed out, "representations are guides for action" (Abric, 1994: 13). If, as suggested by Fare and Whitaker (2014), they succeeded in shifting social representations through their various actions, local currencies could generate changes in the behaviour of citizens and therefore major changes in society as a whole.

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APPENDIX

Figure 1. Rank/frequency analysis of words in the corpus
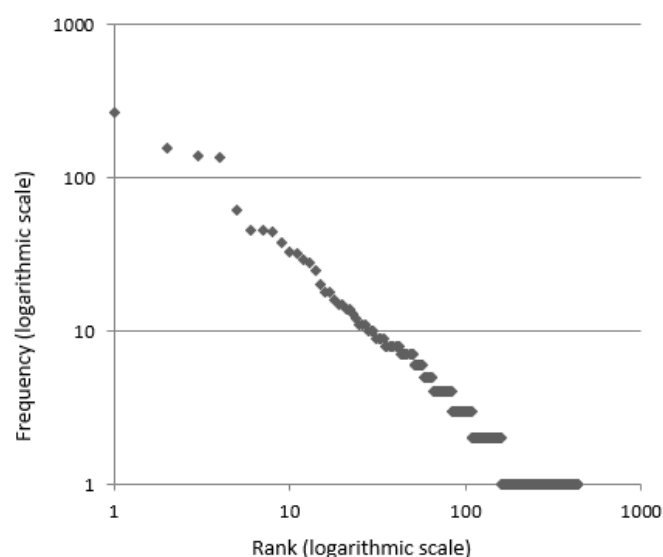
It would appear that the words mentioned by participants are a standard reflection of Zipf's law (or the Pareto principle). The graph shows a linear relationship between the frequency log and rank log of each word's appearance. There appears to be a constant such as frq = K/rank. Here the first word, money, has an occurrence of 270. K therefore takes on a value of 270, such that the "law" predicts that the second word will have a frequency of 270/2 = 135 and the 5th a value of 270/5 = 54, which corresponds overall to the findings in this sample, except that the 2nd to 4th items have a higher occurrence than predicted by Zipf's law. From the 270th item, the terms are hapaxes.

	High importance[ix]	**Low importance[x]**
High frequency	Central core (CC, SR1)	1st Periphery (SR2)
Low frequency	Ambiguous zone (SR3)	2nd Periphery (SR4)

Table 6. Components of a social representation

Based on this table, we can visualise four scenarios:

Box 1 – Core zone: high frequency and high importance

Box 2 – First periphery: high frequency and low importance

Box 3 – Contrasted elements (ambiguous zone): low frequency and high importance

Box 4 – Second periphery: low frequency and low importance

Box 1 is likely to contain the primary elements of the representation. Box 4 represents the distant periphery, which can be transformed without fundamentally changing the representation itself. Vergès (1994: 238) interprets the ambiguity of zones 2 and 3 as "potentially destabilising, possible sources of change in the representation". In relation to the items in box 3, Abric (2003c: 64) says they can "reveal the existence of a minority subgroup with a different representation, one whose central core would be made up of the element (or elements) contained in this box, in addition to the central core identified in box 1". According to Flament (1987), these peripheral elements constitute the representation's "bumper". The central core resists change as its transformation would result in complete upheaval. The peripheral system therefore functions as a defence system for the representation. It is in this peripheral system that contradictions can appear and be tolerated. In most cases, representational changes involve a transformation of the peripheral system: change in weighting, new interpretations, inclusion of contradictory elements, etc.

Tables 7 & 8 present the social representations of citizens and ADML63 members respectively. In order to limit the number of words presented and make the table more legible, we have removed the hapaxes from boxes 3 & 4.

CC SR1: 14 items	SR2: 40 items
money, coins, euro, exchange, payment, cash, security, work, dosh, pay, salary, banquedefrance, happiness, need	note, economy, banker, purchase, well, dollar, franc, expense, value, trade, power, though, currency, wallet, cash, change, pinkfloyd, travel, poverty, gold, consumption, price, contrary, Europe, inflation, investment, portfolio, speculation, bartering, abba, stock exchange, cheque, shopping, cost, savings, inequalities, credit, moolah, pleasure, yen
SR3: 120 items, 33 non-hapaxes presented	**SR4: 159 items, 49 non-hapaxes presented**
freedom, business, liquidity, purchasingpower, live, international, leisure, financialinstitutions, finance, currency, policy, independence, purchase, smallcoins, fluctuation, well-off, europeancentralbank, profit, expensive, trader, commune, comfort, constraint, convert, ease, bills, fortune, bread, profit, timeismoney, endofbartering, button, monetary value	rich, exchangerate, cent, pound, transaction, collection, retailer, taxes, painter, spondoolicks, capital, crisis, exactchange, account, devaluation, dinar, state, european, imf, world, monde, louisdor, solidarity, pesos, small, yellowcoins, giveback, singe, unit, trust, debt, share, conflict, sale, future, capitalism, card, bankcard, dhiram, ecu, finance, link, global, national, paper, tips, health, piggybank, small, cashflow

Table 7. Social representation of currency in the representative sample of Puy-de-Dôme residents

CC SR1: 12 items	SR2: 14 items
exchange, money, trade, power, pay, consumption, bartering, finance, local, freedom, buy, nothingfor-nothing	purchase, coins, bank, speculation, economy, euro, value, poverty, gold, note, work, wealth, wallet, distribution
SR3: 76 items, 13 non-hapaxes presented	**SR4: 69 items, 13 non-hapaxes presented**
payment, currency, savings, rich, inequalities, capital, trust, independence, live, injustice, link, means, tool	dough, price, credit, moolah, debt, market, share, work, desinge, doume, fluidity, givechange, time

Table 8. Social representation of currency among members of the local currency association

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[i] Economists use the term currency, while the other social sciences prefer money (Baumann et al., 2008). For Ould-Ahmed (2008), in reality both terms describe the same thing. This differentiation is therefore essentially a mark of distinction between disciplines. This article uses the terms money and currency indiscriminately. Furthermore, given that local currencies present themselves as currencies rather than as money, what is important is to understand what this term means for citizens and what they associate it with.

[ii] http://www.insee.fr/fr/themes/donnees-locales.asp?ref_id=evo2011&typgeo=DEP&search=63.

[iii] A "hapax" is a term that appears only once in a corpus. As a general rule, they represent more than 50% of a corpus, which is the case here.

[iv] Initial French word in parentheses.

[v] Where the value of the test statistic is greater than zero, the term considered has a frequency that is statistically higher than the overall frequency; the frequency is statistically lower when the value is negative.

[vi] This may also be the reason why psychologists, sociologists and ethnologists prefer this term over currency.

[vii] It is noteworthy that the term job was not mentioned by a single respondent.

[viii] The term buy is however very close to purchase, which is found in zone 2 in both sub-groups.

[ix] The rank of a word is considered to be of "high importance" when it is below the average rank of all words.

[x] The rank of a word is considered to be of "low importance" when it is above the average rank of all words.