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Why do people want their own currency? Money for a day: a social experiment in Argentina

Abstract (272 words)

While initiatives in the social economy keep multiplying, the theoretical foundations for their research need much development; there is minimal reflection on the "institutional innovation" that they apparently trigger. The present paper proposes to approach the process by which the initiatives of the social economy create "new values and institutions" from the perspective of institutional economics. It is based on data collected with ethnographic techniques and interviews during a social experiment in Argentina in 2012, when a small group of low-income micro-entrepreneurs decided to invent their own "money for a day" to exchange their production around Christmas. Given the small size of the group, their high level of social cohesion, and the need to return balances to zero at the end of the day, the entrepreneurs could have bartered, kept track of individual transactions by heart, or chosen a non-perishable and easily divisible commodity as general equivalent. In contrast, and in spite of its high transaction costs, they collectively decided they wanted their own monetary system with physical notes, a reserve, and a treasurer. Why did they want to create fiat money for just a day? This article will argue that their "habits of thought" (Veblen 1899) led them to consider the known institutions of regular money as the superior option to conduct exchanges, in spite of having only a partial understanding of how it works and the inefficiencies that the decision entailed for them. It concluded that the "institutional innovation" of the social economy presents a process of detachment of elements of the "old institutional structure" that are adapted and recombined to fit the new collective values and desires of groups.

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1. Introduction

Complementary and community currency systems (CCS) –networks in which trade is performed with unofficial local money- are becoming more common around the world with a total over 1500 (Seyfang and Longhurst 2013). Researchers have approached them as a scheme within the social and solidarity economy (Pacione 1997; Amin, Cameron et al. 2002), which aims at the reproduction of life and not at the maximisation of profit (Fonteneau, Neamtan et al. 2010) or of general welfare. Moulaert & Ailenei (Moulaert and Ailenei 2005): 2038) emphasise that social and solidarity economy initiatives create "new values and institutions" and "generate institutional innovation" (Moulaert and Nussbaumer 2005): 2073). Initiatives in the social economy, like CCS, keep multiplying while mechanisms within the regular economy falter, but the theoretical foundations for their research are still under development; there is minimal reflection on the "institutional innovation" that they apparently trigger.

By approaching the creation of a complementary currency system (CCS) from the perspective of institutional economics, the present paper proposes to study the process by which the initiatives of the social economy create "new values and institutions". In order to do this, the creation of a complementary currency in Argentina was selected for a case study. In November 2012 a small group of micro-entrepreneurs in the open market of Square X in Buenos Aires informally contacted a sociologist (PhD student) and a social worker to enquire about ways to create a complementary currency that would facilitate their trade, which was low and barely allowed them to go by. The group members produced home-made foods, handicrafts and toiletries by artisanal methods. They all belonged to the disenfranchised middle class and at the time of the experiment they were making ends meet by running micro-enterprises on their own or with a family member. Given the small size of the group, their high level of social cohesion, and the need to return balances to zero at the end of the day, the entrepreneurs could have bartered, kept track of individual transactions by heart, or chosen a non-perishable and easily divisible commodity as general equivalent. However, they decided they wanted their own complementary money system with physical notes and envisioned to create "money for a day", a type of currency that would expire at the end of the day. The idea was implemented with 22 entrepreneurs in December 2012 and by the end of the market day with their own currency they had traded altogether about twice the value of the currency that was put into circulation. The participants were satisfied and the currency was burnt to show everyone how easy a currency can be made and destroyed.

The question remained: Why did they want to create a currency for just a day, considering the transaction costs involved and the more efficient alternatives? While the decision did not appear to be the best institutional solution, the system of one currency per country is relatively a newcomer in economic history. From a political point of view, unified monetary systems have been promoted in the 19th century by states aiming to assert their sovereignty in a given territory (Gilbert and Helleiner 1999) but there is a long tradition of economies that functioned with various moneys. This article will argue that the use of money for trade constitutes part of the "habits of thought" (Veblen 1899) of the entrepreneurs and the choice reveals little of their consideration of transaction costs and efficiency. Habit led them to consider the known institutions of regular money as the superior option to conduct exchanges, in spite of having only a partial understanding of how it works and the inefficiencies that the decision entailed for them. The study contends that the "institutional innovation" of the social economy presents a process of detachment of elements of the "old institutional structure" that are adapted and recombined to fit the new collective values and desires of groups, so they should be seen as a new institution nested in the old ones. Lawson (Lawson 1997) coined the concept of demi-regularities to explain how institutions are only stable within a certain time, while this study proposes that institutions change partially to configure new ones.

The data of the case study was collected by the sociologist and the social worker, who received the advice of the author of the present paper. It follows an ethnographic method because they were asked to keep systematic observations of every meeting, participate in the discussions and record them on video. The three researchers supported the initiative as experts in different roles and will

be referred to indistinctively as "the assistant" henceforth. In addition, a short questionnaire was distributed to the participants before and after the experience of Money for a Day, with the goal of defining the profile of the participants and the impact of the experiment. The names used in this study are pseudonyms.

2. Conceptualising institutions

Institutions shape human behaviour and provide structure in society including critical mechanisms for decision-making. Whilst central to human societies, there is still little consensus on a common definition of institutions or how we may do institutional analysis (Hollingsworth, 2002). Academic disciplines have tended to develop their own approaches to discussing and examining institutions but there is little collaborative cross-learning. These include several approaches by economists (*e.g.* (Williamson 1985; Hodgson 1989; North 1990; Hodgson 1998; Hodgson 1999; Hodgson 2003; Hodgson 2006; Hodgson 2006); political scientists, sociologists and historians (*e.g.* (Ostrom 1990; Campbell, Hollingsworth et al. 1991; Powell and Di Maggio 1991; Campbell 1993; Hall and Taylor 1996; Chang 2002). In spite of some variation in the focus of the definition, it is clear that institutions form an element in the social structure (Wells 1970), a broad concept that gives stability and meaning to human action (Crespi 1992). Hodgson suggests that institutions are structures that are both external to individuals, as well as 'ideas inside the mind' (Hodgson 2004): 424) and defines them as "socially embedded systems of rules" (Hodgson 2006): 2).

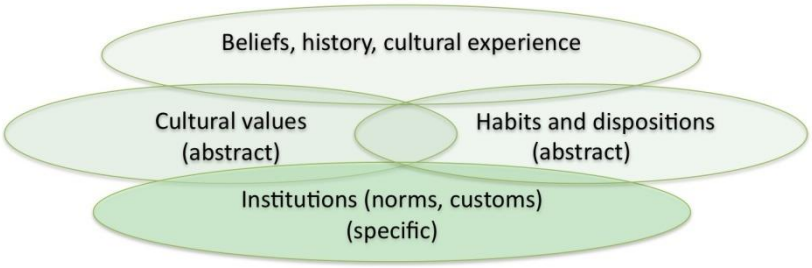
This last definition deserves further scrutiny. The first basic element in Hodgson's definition of institutions is their characteristic of being "socially embedded". For instance, they reflect the beliefs of "good personhood" within a specific cultural setting that constitutes the context of the institutions in which agents create and recreate rules in society. Frank Moulaert and others (Moulaert and Nussbaumer, 2005; Moulaert and Ailenei, 2005) approach the process of institutional change as one that binds a community as the result of communities of cooperation. Moulaert and Nussbaumer (2005) consider that institutional innovation kindles cultural emancipation, social cohesion, interpersonal and intergroup. This relates to the concept of networks, which establishes the primary social context that embeds institutions in existing social relations. Mark Granovetter (Granovetter 1992): 4) defines network as a regular set of contacts or similar social connections among groups or individuals. A network embeds the values, interests and intentions of agents and contributes to their co-formation, supports their learning and experimentation, and eventually defines the institutionalisation of new collective practices or institutions.

The second basic element in Hodgson's definition emphasizes the notion of institutions as "rules", which have the specific logic format "in circumstances X, do Y" (Hodgson, 2006: 3). Going beyond a merely limiting perspective, Hodgson expands upon sets of institutions, as 'durable systems of established and embedded social rules ...[that] both 'constrain and enable behaviour' (2004: 424). The rule refers to 'an injunction or disposition' that guides human behaviour. Hodgson contends that rule durability comes through the capacity of institutions to 'create stable expectations of the behaviour of others' and thus permit (but not be reducible to) 'ordered thought, expectation and action' (Ibid: 425). Hodgson argues that while nature makes various actions possible in circumstances X, society indicates one specific action Y as the accepted one within a particular social setting, time and place, and this creates an inclination to behave in a certain way. In this way, rules are 'considered, acknowledged, or followed without much thought' (Hodgson, 2006). Rules may be potentially codifiable and have a normative content, expressing what is expected by others. Agents may ignore these dispositions to act in certain ways and do differently, precisely because they have the agency. But their choice does not mean that the inclination does not exist, and at a social level this will be seen as a deviation - or breach of the rules - which could be sanctioned.

Towards understanding the emergence of institutions, particular attention has been drawn to the role of habit. The fact that knowledge of rules may be tacit makes it problematic to determine whether behavioural tendencies are due to natural instinct. A distinction thus needs to be made

between instinct, habit and actual behaviour. Instinct is genetically inherited while habit is socially acquired. This distinction follows the tradition of the Old Institutionalism, a perspective that originates in the ideas of scholars like John Commons, Thorsten Veblen and Clarence Ayres, among other authors, and who share the denial of the "natural" character of any prevailing social order (Hodgson 2003). Already in the early 20th century the biological or instinct-based determination of behaviour was contested by the idea that it is a direct result of environmental conditioning or stimulation (Degler 1991; Hodgson 1999). Only instincts are inherited or biological but they are not enough to explain the variety of human actions and interactions. Instinct explains just a small part of the variety of human actions and interactions, while habits, on the other hand, are ubiquitous and make institutions work because 'the rules involved are embedded in shared habits of thought and behaviour' (Hodgson, 2006: 6). Drawing on insights from Dewey (1922), Hodgson described institutions as both reflecting and shaping habits and dispositions (2004: 656). Habits are dispositions to engage in previously adopted or acquired behaviour, triggered by specific stimuli or contexts (Hodgson, 2003: 556). They are resilient because they create an immanent or unreasoned disposition to act in a certain way. They are dispositions, propensities or inclinations, and sustain the rules that make up institutions, while behaviour is the actual effect of taking action, including the one of not taking any action. This relates to the concept of agency, which is discussed further below.

Figure 1
Unwrapping values, habits and norms



Source: Derived from Ritchie, 2013.

Veblen (Veblen 2004/1919) saw the interactions between individuals and institutions as a relationship of causality in both directions, although agents and institutions exist at different ontological levels. Related to agents, structure is emphasised to involve rules, norms, meanings and relations. Hodgson (2004) proposes an evolutionary dimension in a 'non-conflationary and casually interactive' approach that tries to capture how individual intentions or preferences change. He describes this as anti-reductionist, and incorporating a causal process of time in the relationship between structure and agents. This view encompasses the interactions between individuals, and interactions between individuals and their environment; and causal explanations for 'individual intentions' and the 'human capacity of intentionality' (Hodgson, 2004: 452). With an emphasis on habit, he describes actor and structure as distinct but 'connected in a circle of mutual interaction and interdependence' (Hodgson, 2004: 446). Figure 1 endeavours to broadly capture (abstract) values, habits and dispositions, embedded in broader beliefs, history and cultural experience, influencing and being influenced by institutions.

3. Money or barter?

Individual action is thus seen as being moderated and affected by institutions and the networks with which they interact. In the case study of Square X, the network relied on several years of trading in the same place, repeatedly organising various events to increase sales. The study detected that their individual action was affected by a shared identity as disenfranchised middle-class who turned to producing for their micro-enterprise in the lack of other options like waged employment or retirement. They saw themselves in the need to increase sales to generate more income, but did not consider other options were possible at that time. Among the rules they had created for the network as points of agreement, the participants mentioned the opening times, the contribution of fees for cleaning and illumination, the prohibition of certain items, and the characteristics of the packaging. These rules were discussed for some time and once agreed upon, the participants regarded them quite highly and necessary for the maintenance of their market, which derived in high compliance. Transgressions were dealt with collectively and behaviour was usually corrected via social control mechanisms. None of them was ever expelled on account of transgressions.

The problem of the entrepreneurs participating in the initiative was their constrained access to official money via sales, while they had sufficient capital in goods on sale. The sales were too low to generate sufficient income to afford small extra expenses like a Christmas present. At the same time, they considered their business was worth keeping because there were no other alternatives in sight and "a little income is better than no income at all", as Jose expressed it. The entrepreneurs were all in a position to produce more, but they considered there was insufficient demand to justify this and they produced only what they knew that they would sell. With Christmas approaching, they informally talked about exchanging each other's products. Five of the micro-entrepreneurs had organised a barter experience one year earlier, in which they changed their products around November to have Christmas presents for families and relatives. They were so satisfied with the experience that they wanted to repeat it, but expanding the scale and scope. That called for more participants with a broader choice of products on offer and also different values. They wanted to trade both smaller and larger goods, including goods on sale for higher prices than home-made foods (eg. pullovers, scarfs, toiletries). Then they came to the idea of creating vouchers that they could use as means of payment and were convinced that with the means of payment they would be able to make the exchanges "more transparent", detaching the transaction from the personal relationship and generally making sure that "nobody loses", as Patricia expressed. If the experience was positive they could "repeat it automatically in years to come with less discussion", Lili added.

In order to organize the new experience, two of them visited a sociologist and a social worker for support and ideas. The result of the meeting was to summon interested participants for a certain date at 19, when the regular trading in the open market was finished. On the day selected, 15 entrepreneurs stayed (11 women and 4 men) and the discussion took place under the trees. They had all been active in the *Redes de Trueque*, the largest contemporary experience with a Complementary Currency System that allowed 2.5 million Argentines to go by in the crisis of 1998-2001 (Gomez 2009; Gomez 2010). The average age as 48 and the average educational attainment was 11.5 years, equivalent to complete primary education and incomplete secondary education.

The group's understanding of the monetary system was basic and the discussion started on what creates inflation, the role of Central Banks and the importance of monetary collateral, which evidenced that the knowledge of the micro-entrepreneurs was barely informed by popular media. None of them had any training in Economics or Accountancy, for example. The conversation became more animated when the participants started telling their experiences in the *Redes de Trueque*, what they did there, how it improved their lives during the crisis. They discussed the experience of bartering one year earlier and how they dealt with the problem of the double coincidence of wants (Menger 1892; Peacock 2012). This is the mainstream explanation of why money replaced direct bartering and maintains that a monetary system arises in the long run out of trading because of the problem of finding an immediate direct buyer and seller of a good of the same value. It contends that a general equivalent as means of payment reduces the transaction costs (Jevons 1875)/1875)

and Melitz (1974): 77) defined money as 'all goods that are held in significant measure in order to economise on transaction costs in the activity of trading a variety of other types of goods'. However, the participants that had experienced with bartering one year earlier did not recognise it as a problem because they could adjust quantities in such a way that they found a price in kind at which the exchanges took place. They did not report problems with finding products of similar value during the barter, and the main challenge they reported was the limited choice of products to choose from. Their desire to use money did not respond to the need of solving a double coincidence of wants but of attracting more participants and they thought that the circulation of a currency would do that because "everyone is used to money", José says, and not to barter. By using currency, people with goods of higher values would be able to buy a variety of goods of smaller values and "it is easier to compare prices with money and keep trade honest", Carmen adds. They asked what other alternatives they could use.

The assistant suggested using a basic commodity that could be easily be fractioned in small amounts to make payments, like cigarettes, pencils, or candies but these were discarded with the replies: "Who will buy so many of them if we already do not have (official) money?", "what do we do with so many of them after we finish trading, nobody needs them", "those things are too small to take home; we want Christmas presents". The sentiment that "money is what we are used to, money is better" concluded the discussion as a point of agreement. Scholars from sociological theory and institutionalism do not dispute that specific commodities originated as means of payment to facilitate trade, but do not argue that they were (or are) inherently an efficient solution. They suggest an evolutionary structuration process followed the social, economic and political needs that rose with impersonal exchange and derived in the appearance of money (Seyfang and Pearson 2000). Geoffrey Ingham argues that a monetary system is a set of institutions embedded in a society (Ingham 1996; Ingham 2006) and the fact that a commodity became the widely accepted means of payment does not mean that its efficiency is superior to all other possible means of payment: it simply means that it has become an institution 'out there' that others legitimate by using it in practice. (Boyer-Xambeu, Deleplace et al. 1994) provide evidence that the co-existence of various means of payment in Medieval Europe actually increased transaction costs because it required sophisticated expertise to determine the value of the thousands of coins in circulation. With the passage of time and the rising of the nation-states, the number of currencies was reduced significantly and eventually fiat money became the accepted means of payment supported on the Central Bank and similar state organisations.

The entrepreneurs in Square X hence decided that they wanted a currency that would be used for that day only among the closed network to facilitate trade –no barter, no commodity as general equivalent, but scrip. The participants asked the assistant what she was proposing and she explained that it was possible to design a type of money like that one, which only required cutting pieces of paper, as long as they trusted each other. The currency would be the physical representation of the trust they had in each other. Credit money relies on trust and some scholars (Fare et al, 2014) have seen that trust as a "commons" in the sense given by Elinor Ostrom. Ostrom (1990) looked at the development of institutions for collective action as shaped by the local context in addition to actor capacities and interests. There is a double connection with Hodgson´s definition of institutions as embedded systems of rules (Hodgson, 2006). While institutions facilitate collective action, it is via collective action that new institutions are created. In the case of Square X, the creation of own means of payment depended upon agreeing on a number of rules that had to be negotiated among the participants and this required significant collective action in terms of mobilisation and bargaining. For instance, the creation of currency required rules on how much to create, how to bring it in the system, how much to give each participant, what the scrip should look like, and the key question of what to use as collateral in a treasury. The process of institutional design, in turn, was inspired by the characteristics of official monetary systems which participants "are used to". The meeting was closed and the discussions would be reconvened the following Saturday.

4. Adaptation of rules by collective action

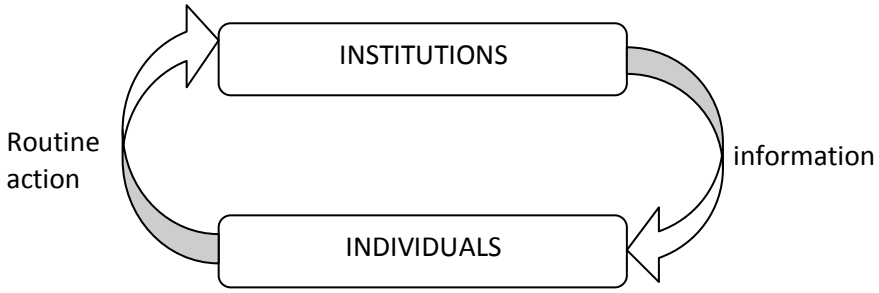
Money was a long established institution for the micro-entrepreneurs that participated in the experience. They were used to it and they aimed to adapt it to their needs in that particular context, by creating a new local type of currency for themselves. The habit of using currency sustained their conviction that they should recreate it to facilitate trade. Bourdieu´s concept of habitus relates to people's common histories and backgrounds, as leading to shared thoughts, dispositions and strategies of action, similar to Veblen's conceptualisation of habit discussed in Section 2. Habit sustains that actors behave in the ways they are comfortable with and reproduce social structures, influencing institutional development. Campbell (1997) suggested that most change in existing institutions unfolds in a process of delimited selection, as permitted by the existing arrangements. For the micro-entrepreneurs in Square X, the use of currency to trade their goods was too obvious to require further explanation and they did not see why the assistant analysed other alternatives, which seemed unnecessary. The micro-entrepreneurs in the case study actually used some of those words in their discourse: "money is simple", "everyone knows how to make and receive payments, why look for something different?"
Economic sociology has triggered key additional insights into institutional change as "path dependent". (DiMaggio and Powell 1983; Friedland and Alford 1991) recognise that institutional development is heavily influenced by historical dominance and highlight 'sunk costs' in existing arrangements, limiting options and flexibility in the construction of new institutions. Yet they argue that the reproduction of existing institutions may also be due to a lack of imagination of alternatives (Ibid 1991: 10), which is a "source of inertia" (Dosi, 1995: 12). DiMaggio and Powell (1983) build upon the early conceptualisation of "isomorphism" introduced by Meyer and Rowan (Meyer and Rowan 1977) that addresses the homogenization of organisational forms, among other institutions and forced communities to 'accommodate' the outside world. They highlight three types of 'isomorphic' influence: coercive pressures that are driven by political pressures and legitimacy, mimetic pressures pertaining to a tendency to reproduce 'standard responses to uncertainty', and normative pressures related to a desire for 'professionalism'. In the case of Square X, the micro-entrepreneurs were inclined to design their currency "like any other currency", as Eleonora called it.

The question of enforcement and risk of transgression was soon discarded as a realistic concern of the micro-entrepreneurs. They looked at each other and agreed to comply by the rules of the group. The inclination to abide by rules that are known to everyone seemed internalized by individuals, in the same way as their expectation that others will also abide by the rules as well and this reciprocal expectation constitutes an incentive for them to abide by the rules and hence reproduce the institutions. As (Schofield, Caballero et al. 2011) express it, "interactions create the structure that motivates obedience. The behaviour of others motivates behaviour". In this way, the authors continue, shared expectations on each other's actions become "self-enforcing" in the sense that agents will generally follow the equilibrium behaviour, as long as the others follow it as well. . "From each decision-maker's perspective, the others' expected behavior constitutes the structure motivating her to conform to the behaviuor expected of her. But by conforming, she contributes to motivating others to conform too. Thus, the structure is self-perpetuating, and although it is beyond the control of each decision maker, it is endogenous to all of them taken together" (Schofield, Caballero et al. 2011: 27).

Hodgson (1998) depicted the interaction between agents and institutions as a stable loop that reproduces itself. Institutions inform individuals on what actions Y are acceptable in circumstances X and individuals will be inclined to act in that way. The repetition of the action, in turn, reinforces the rules contained in the institution and their embeddedness in particular a social setting. Institutional change relies on the actions of agents; individually or collectively, they affect the institutions that rule social behaviour as part of the process of their interaction as agents with other agents, institutions, and the values and shared beliefs in the context. Hodgson (Hodgson 2002) terms reconstitutive upward causation, describing the process by which elements of a lower ontological level, like agents, affect those at a higher level, like institutions. The inverse process is termed reconstitutive downward causation, when institutions inform and contribute to the

formation of habits and individuals, by defining "what has meaning and what actions are possible" in experimentation (Powell and Di Maggio 1991):9). Crossing into fields such as management, Koene (2006) highlights the varied influence of the context – affected by local pressures, societal confidence, and agent power – and the potential behaviour of agents affecting institutional change and outcomes.

Figure 2.
The Institutionalist action-information loop



Source: Hodgson, 1998:176

The fact that scrip is the most accepted means of payment to facilitate trade seemed to make the search for alternatives unnecessary in the case of Square X. At the same time, making unofficial currencies is barely acceptable in most countries in the world, but none of the participants in the scheme noted this or made an issue out of it. Institutional change implies finding new ways of acting and this search happens under the limited inspiration of isomorphism (imitating similar existing institutions) and the constraints of path dependency that give resilience to the existing institutions of money that define what is possible and what is not. Schofield, Caballero et al. (2011: 39) note that past institutional elements are "the raw material on which new institutions are based", while Sugden (Sugden 1989) argues that agents engaged in institutional change coordinate their strategies to achieve it, but "generally adopt rules which are analogous to rules with which they are already familiar". In this case, familiarity relates to habits as inclinations and preferences that limit the scale and scope of the change process. Along this line of thinking, Campbell (2004) argues that actors often create new institutions through a process of "bricolage": recombining elements in their institutional repertoire to deal with new situations (Gomez 2008). New institutions often resemble older, familiar institutions because they contain elements inherited from or inspired by past institutions. In addition, networks of interaction frame strategies of institutional change. Schofield, Caballero et al. (2011) and (Greif, Milgrom et al. 1994) argued that organizations inherited from the past and cultural beliefs shape the choices among alternative institutions, among other reasons because the interaction with specific networks determines whose identity is known to whom, and where information flows, while cultural beliefs coordinate expectations.

In the case of the traders of Square X, the belonging to the disenfranchised middle class, the low income of the microenterprises, the absence of attainable alternatives and the previous positive experience with other complementary currencies have clearly opened their minds to the possibility of creating a new type of money, one that would circulate among their specific network alone, which relied precisely on collective action to define a new institution. Networks are critical because they provide information and examples to imitate. They also shape intentions and interests, which affect the reasoning to search for new solutions. So while habit provides the cognitive means by which information is sought and interpreted, the networks of belonging define what experimentation is possible and support its institutionalization as a new rule of action. Granovetter (1992) posits that 'stable' economic institutions emerge as growing 'clusters of activity' around existing personal networks. Granovetter theorises that the level of network fragmentation and cohesion, or 'coupling and decoupling' is a significant indicator of potential outcomes, and that

actors whose networks straddle the largest number of institutional spheres will have the most advantage.

The micro-entrepreneurs in Square X could rely on both elements mentioned above to venture in the "bricolage process": a network with a high degree of trust and social cohesion to feed into their collective action, on the one hand, and knowledge of the existing monetary institutions as "the raw material" on which their new currency would be based. However, the complications of creating a currency became evident as the bargaining into its design began. It took another two sessions of negotiations in consecutive Saturdays. The adaptation of the existing rules entailed looking into a very large number of matters, although they were familiar with them. For example, they had to decide what denomination to write in the yellow small papers that the assistant had brought to use as notes. Nobody knew. She asked if anyone had any goods that required 50 cents, and there were not. Then she asked the same question for $1 and there was one, so they decided to make $1 the note of smallest denomination. At that point another participant said she had some pastries to sell for $1.50, how should she do it? Another participant suggested she should sell two pastries for three, and she accepted. Eventually, three entrepreneurs took the task of deciding how many notes to make of each denomination and they took almost one hour to decide. The currency was given the name "points" to avoid transferring the name "peso" of the official currency to the currency of Square X.

The familiarity with the rules that had to be recreated was only partially helpful, somehow limiting the usefulness of the concept of isomorphism. A question that kept coming in every discussion during the adaptation of institutions was: "what do we want to achieve with this rule?" What is this rule for, what is it supposed to imply for the scheme? Every decision was a continuous bargaining process between applying existing rules and designing new solutions. The creation of a treasury illustrated the process of bricolage between old and new rules. The goal in organizing a "treasury" was to avoid that anyone would leaving the market in disappointment. The first idea discussed was to deposit pesos in official currency, so at the end of the scheme, if anyone was unable to find anything to buy, they could at least return home with some money. The option was rejected by those who said that they did not have that amount of money, so they could not afford it. The second idea discussed was to leave as deposit an amount of goods equivalent to the points obtained and this was accepted some further discussion. The assistant explained that the risk was that the first ones to recover goods from the "treasury", when returning the notes, would take the best products. When the last ones came to return the notes and recover their deposit, the "treasury" would only have less interesting goods and those participants would leave disappointed. The decision was made that the participants would have the right to recover their deposit first and subsequent bartering would follow. This decision seemed to satisfy them, mixing the existent institution of a treasurer as recipient of deposits, which would exchange currency for real value as last resort, and the new rules made by the group according to their preferences and possibilities, which was to keep the deposit in kind and some special provisions to avoid disappointment. The assistant was chosen to act as treasurer and she would keep records of who had left what.

The last issue that was decided was the amount of points to create and how to distribute them. The assistant assessed the sales they had per day and estimated that it would be enough with 20 points each, but they argued that it would be better to do 30 points to facilitate more trade. It was agreed to use the same prices as in regular money, to keep the parity of one peso = one point. The notes were made and when each participant received them they were asked to sign them. The goal of signing them was two-fold, as an additional security feature and to transmit to them that this currency was a reflection of their work and was backed by their production. After the distribution of the notes, trade began and this went as in any other market. The actual trade happened on the second Saturday of December 2012.

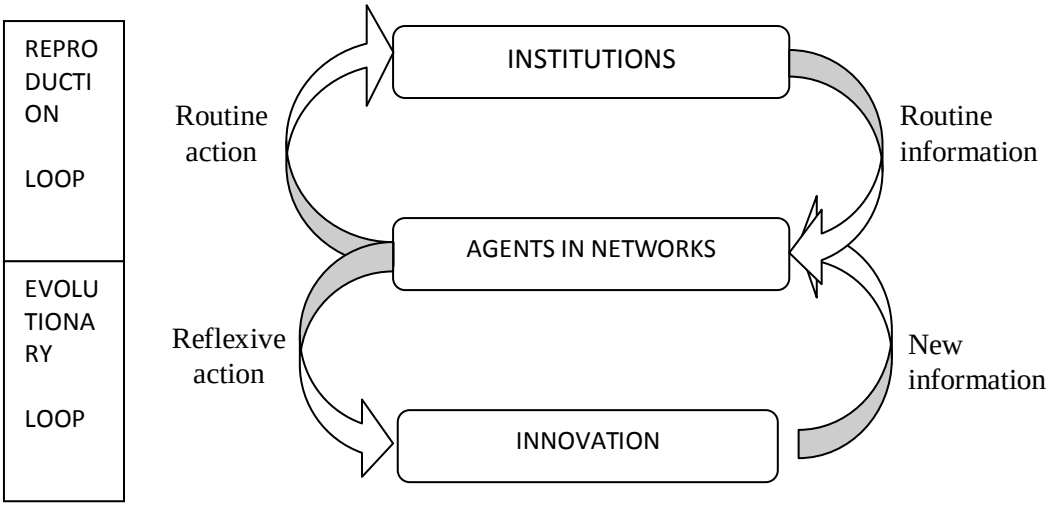
5. Keeping the rules – or not –

After abiding by the rules, outcomes may or may not go as informed by the rule, and this aspect could be added to the model elaborated by Hogson depicted in Figure 2. As long as following the rule leads to the expected results, no further thought follows - institutions are points of equilibria in terms of the coincidence between expectations and actual outcomes-. Aoki (Aoki 2007): 3) refers to "the *consequence function"* that specifies "particular (physical) consequences of concern to some or all the agents [contingent on the state of nature]." In the logical form of the rule mentioned above, "in circumstances X do Y", there is a certain expected outcome Z that should follow the action that the individual performed in accordance to the rule. However, it is conceivable that the outcomes will not be aligned with the expectations generated by the institutions, for various reasons that will be discussed in the next section. So, another way to approach institutions as points of equilibria is to define their logical form as "in circumstances X do Y expecting Z". In this way, obtaining Z provides the motivation to do Y in circumstances X, although actions may be done without premeditation and out of simple non-reflexive rule-following routine. Even if that is the case, there is still an outcome Z that is expected and the failure of Z to happen may trigger a reflexive response.

However, situations are rarely completely invariable and identical, and sometimes they are completely or partially new, which may happen when changes in the environment make rule following inadequate to achieve particular objectives. Situations in which Z fails to happen may be that the circumstances are new (X is unknown) or has changed in such a way that Y is done but Z fails to happen, or that the social values that embedded institutions have changed and Y or Z are no longer acceptable. When there are no pre-existent tendencies indicating what path of action to follow, a response needs to be formulated that will satisfy the interests of the agents. In comparison to figure 2, agents in figure 3 engage in finding a new solution. If it is a new situation, the logical form is in circumstances X', do Y' to obtain Z', which represents an entirely new rule. If it is a known situation in which an expected Z fails to occur as outcome due to changes in the context, the logical form is that in circumstances X, do Y' to obtain Z. Schofield, Caballero et al. (2011) refers to this situation as an "institutional disequilibrium" which results when an institution ceases to an accepted alignment between beliefs, cultural values and experiences, with courses of actions, expectations and outcomes. This can occur either due to exogenous shocks or due to endogenous changes in the habits that change gradually over time as a result of the operation of the institution itself and may ultimately make the institutions obsolete (Greif and Laitin 2004). When Z fails to happen, agents are forced into reflection and the networks of belonging shape experimentation for new solutions (Lane et al., 1996).

The process of institutional innovation is depicted in figure 3. The information – action loop of figure 2 is now reconfigured into two loops. In the first loop (top), agents respond to a routine situation X with a routine action Y. It is unreflected action already experienced as acceptable and leading to an expected outcome Z. Routine action is repeated in the *reproduction loop*. In the case of Square X, this would be the use of regular official money. The model is reconfigured to include a second loop in which agents face new or unknown situations. When exposed to novelty, insufficient information is available in the known institutions to define an appropriate course of action. Rational learning agents perceive this as a gap in the form of a "what to do next?" question. The existent institutions work to inform what experimentation is possible, as they hold a role as enablers and persuaders of action. This type of reflection is termed the *evolutionary loop* (bottom). Reflexive action takes over routine and the "skilful actors" begin their innovation and learning. Experimental actions are embedded in networks that influence both the interpretation of the situation and the final decision-making. In the case of Square X, it is represented by the design and use of a complementary currency. If the response Y' is tested and perceived as suitable to achieve acceptable results Z' every time that circumstances X' are present, then the action is repeated for that situation and eventually becomes the accepted course of action, which may be imitated by others in the network and may cement as institutions in the long run. In the case of Square X, this would be the regularisation of exchanges with the same complementary currency, or at least the repetition of the experience for every Christmas.

Figure 3.
Institutional innovation



Own elaboration

The proposed description explains the process that gives birth to new institutions, although in rigour they are only partially new, as they are based and depend on pre-existent institutions as their raw material. They do present an innovation in the sense that they are a new course of action and which may become an accepted rule. Aoki considers that once an institution acquires a linguistic or symbolic representation recognized and reproduced by every agent, it may be regarded to have existence as an objective reality, which implies that it has evolved into a viable institution. In contrast, even if they acquire legal status by becoming a state-backed law to induce a course of action Y in circumstances X, the absence of complementary institutions, supporting competence and general acceptance will not make it an institution (Aoki and Hayami 2001): 267–269). Schofield, Caballero et al. (2011: 25) provide a similar definition and states that a social situation is 'institutionalized' when it "motivates each individual to follow a regularity of behavior in that social situation and to act in a manner contributing to the perpetuation of that structure". For an institution to be perpetuated, the authors continue, "its constituent elements must be (1) confirmed (not refuted or eroded) by observed outcomes (2) reinforced by those outcomes (in the sense that its ability to be self-enforcing does not decline over time) and (3) inter-temporally regenerated by being transmitted to newcomers." The next section will study situations in which these principles are challenged by a group of agents with divergent values and belief systems.

Should all open markets have their own currency? Is this the best solution for this type of micro-entrepreneurs with low sales? Jens Beckert (Beckert 2003) provides a theory of action in economic contexts of complexity and novelty. Uncertainty not only makes it impossible to identify a 'best' solution but to link accurately the causal relationship between means (strategies) and outcomes. Every situation has several readings judged as adequate by the actors. Other open markets in squares have not developed this solution. In turn, decisions depend on joint interpretations of the situation within networks of belonging. This is where inter-subjectivity and networks play a role, since orientations, perceptions of values and beliefs are formed with the expectations brought on them by the social surrounding where they are embedded (Granovetter, 1992). Other groups of traders have not thought about breaking with the use of regular money in this way or may not have the sufficient social cohesion to make it possible. In Square X, the moment of crisis was resolved in a process of innovation by experimentation in which possible future states were considered along with the strategies to reach them. Experimentation represented a creative achievement on the part of the actors that demanded imagination and judgement, taking a reflexive distance from habit. The term "acceptable solution" notes that it need not be "optimal" but one that resolves a situation. If

actors succeed in framing a new mode of action and repeat it in similar situations, then they may repeat it and "something new enters the world" (Joas 1996):128). Aoki (2007: 11) defined the process as an "equilibrium displacement and its reconstruction".

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