

Complementary Currencies as a Method to Improve Local Sustainable Economic Welfare

By

Robert Costanza^{1,2}, Joshua Farley^{1,3}, Gary Flomenhoft¹, Jonathan Blake⁶, David Chappelle³, Matias Chiota³, Kelsey Cornelius⁴, Adam Dubin⁵, Bethany Eisel³, Megan Gilmartin⁴, Amy Kirschner⁴, Laura Markowitz⁶, Kriti Mehta³, Adam Murray⁶, Thomas O'Dowd⁴, Jordan Rizza⁷, Lauren Sparacino⁴, Todd Taylor³, Alicia Turner², Walter Tusinski⁴, and Katrina van Dis³

1. Gund Institute for Ecological Economics
2. Rubenstein School of Environment and Natural Resources
3. Community Development and Applied Economics
4. Environmental Studies Program
5. Political Science
6. Burlington Currency Project
7. Economics Department

The University of Vermont
Burlington, VT 05405-1708

*Corresponding author
Telephone: 802.656.2974
Fax: 802.656.2995
email: Robert.Costanza@uvm.edu

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Abstract

Complementary currencies (CC's) have been proposed as a means to stimulate local economies, reduce unemployment, and promote cooperative and sustainable community development. There has been an explosion in the number of CC's in existence in the last decade. There are now well over 5000 such currencies worldwide. We surveyed a representative sample of these currencies (38) to determine their relative degree of success and the structural and social characteristics that explain their relative performance. We found that while the number of CC's has increased dramatically, their degree of success is still quite limited. Most contemporary examples are either operating at very low levels of activity, relative to transactions in the national currencies or are functioning simply as "gift certificates" for the national currency. An exception to this are the currencies in Argentina that have sprung up in response to the collapse of the national currency – but these are operating as alternatives to the national currency rather than compliments. The major factors we identified as limiting the success of real CC's are the lack of major institutional buy-in and structural features about the currency's designs that limit their volume of transactions. We have redesigned Burlington Bread (an existing but low volume CC in Burlington VT, USA) to incorporate the lessons learned from our survey, and plan to achieve buy-in from the major institutions in Burlington (City Government, University of Vermont, Chamber of Commerce, etc.) before re-launching the currency at a planned Sustainable Communities conference in July 2004.

Introduction

A “complementary” currency is a type of quasi-monetary exchange medium that is intended to function as a complement to (rather than an alternative to) standard national currencies. There has been a veritable explosion in the number and types of complementary currencies in existence in the last few decades (Figure 1). By some estimates there are as many as 4000 such systems currently in use (Lietaer 2004).

Why do we need complementary currencies? The major motivation for creating these systems has been the perceived problems with the current system of national currencies, which include (Soddy, 1961, Greco, 2001, Lietaer 2001):

1. In current national currency systems, *private banks control* the creation of credit and money, and conventional money is, in essence, a private capture of a public good. This results in money that is scarce and that promotes competition.
2. Because of this locus of control of the creation of money in private banks in the current system, *interest and seigniorage accrues to the banks* and their private shareholders and customers. This implies that the benefits of the monetary exchange system accrue to the owners, shareholders, and large customers of the banks, rather than to the community at large.
3. The current system *encourages competition* and underemployment of resources. If money is scarce there may not be enough to cover all the potential exchanges that might productively occur.
4. The current system leads to an increasing *concentration of wealth*. Since the interest on money accrues to a select group of shareholders and not the community at large, the distribution of wealth over time becomes more concentrated in the hands of those few.
5. The current systems are subject to *unstable* inflation/deflation cycles, monetary crises, speculative bubbles, booms and busts, etc. This instability can negatively affect many segments of society.
6. The current system does not promote local economic activity, but rather competition in the national and global market.
7. The current system creates a growth imperative, due to creation of money through interest bearing loans. Repayment of these loans requires economic growth to generate the money to pay back the original loan plus interest.
8. The current system combines the means of exchange, store of value, and loans for business and property into a single mechanism, confusing the different functions.

Complementary currencies (CC's) have been designed to ameliorate many of these problems, not by replacing the current monetary system, but by supplementing it with a system aimed more at promoting cooperation at the local community level. The general characteristics of these systems that allow them to function in this way include:

1. The community controls the creation of the CC and it is treated as a public, rather than a private, good. This implies that the CC is in sufficient supply and promotes cooperation rather than competition.

2. Complementary currency is interest free, and seigniorage generally accrues to the issuers within the community. This implies that the benefits of the CC exchange system accrue to the community at large to support community cooperation.
3. CC's therefore encourage cooperation at the community level and full employment. Since CC is created whenever there is need, it is sufficient to cover all potential exchanges and encourages full employment of labor and other community resources.
4. Since the interest payments transfer wealth from debtors (the poor) to creditors (the rich), the lack of interest on CC's leads to a more equitable distribution of wealth.
5. CC's are not subject to speculation or speculative bubbles. Because they are often interest free and their creation is tied to need or real goods and services in circulation, they are less subject to inflation and/or deflation. Carefully designed CC's are therefore potentially more stable than national currencies and able to buffer instabilities in national currencies

In this study, we collected and analyzed data about a representative sample of CC's to address the following questions:

1. How well have various forms of CC's functioned at achieving the goals mentioned above?
2. What characteristics of the systems have contributed to their success?
3. What factors have limited their success?
4. What are the appropriate scales for CC systems and how do these scales interact?
5. Can we formulate an "improved" CC system that could overcome some of their remaining problems and limitations and allow them to better achieve their goals?

Types of Currency Systems

Various types of CC's have developed in recent years. Figure 2 offers a typology developed by Bernard Lietaer (2004) of the major characteristics of currency systems. These characteristics include the currency's objective, support medium, function, issuing process, and cost recovery method. Below we briefly describe the origin and characteristics of conventional national currencies and several types of complementary currencies now in use.

Conventional National Currencies

For much of history, national currencies were backed by commodities—generally silver or gold. In the simplest form, the currency was a piece of silver or gold of an established size, weight and value. Paper notes were backed by precious metals stored somewhere in government vaults. Most western industrial countries briefly abandoned this system during World War II, and permanently abandoned it during the 1970s. National currencies are now fiat backed (i.e. backed only by trust in the system rather than by gold, silver, or other commodities) and are created or issued for the most part by private banks in the form of bank loans (credit). In the US, for example, approximately 95% of the money supply is bank credit vs. only 5% as printed currency. The money system is "non-rival" because the more people use it, the better it works, and "non-excludable" because no one can be prevented from participating. The money system is therefore a pure public good. The

vast majority of money is loaned into existence by commercial banks at interest, and is destroyed when the loans are repaid. The bank profits from this transaction by retaining the interest payments, which is a transfer of publicly created value to the private sector. Because more money must be paid back than is initially loaned out, the system depends on constant economic expansion. In an economic recession, demand for new loans falls, but required payments on existing loans do not. This leads to the destruction of money, which makes it virtually impossible to pay back existing loans bearing interest. Borrowers default, aggravating the recession and threatening to destabilize the monetary system unless the government intervenes. The main tools of monetary policy are Central Bank control over bank-to-bank interest rates, and over deposit reserve requirements. These centralized policies cannot address regional variations in the economy.

Fiat Backed CC's

Fiat backed complementary currencies function very much in the same way that national currencies do. They hold no inherent value - that is the paper currency is of no worth in itself. The value is based on "faith" in the governing monetary organization or the community that creates it and has no convertibility properties (i.e. it cannot be exchanged for a standard quantity of precious metal). Fiat currencies hold value as economic tools in that they are very effective tools of accounting and methods of exchange.

Fiat backed complementary currencies differ from national currencies in a number of ways. National currencies derive their value from their scarcity in relation to their usefulness. Community currencies derive their value from their abundant use and recirculation within the community. This fundamental difference (scarcity vs. abundance) relates to the nature of the two currencies: national fiat currencies promote competition while community fiat currencies promote cooperation and development of community bonds. Therefore, community currencies are important tools in community economic development because they effectively retain the positive attributes of national fiat currencies (method of accounting and exchange) while at the same time creating a sense of community instead of a sense of competition.

There are a number of complementary currencies that are perceived as local fiat, but are effectively commodity-based and are backed by their respective national fiat currencies. In other words, they operate as "reusable gift certificates." The value of these community currencies are backed in whole by an equivalent amount of national currency. The drawback of this system is that the "trust" factor of the fiat system falls back on the central monetary organization that issues the national currency rather than the local community's ability to create goods and services. Also, the most valuable asset of a complementary currency is the community's ability to create new money as they see fit. When the local currency needs to be backed by the national currency in full, the creation benefit is lost.

Mutual Credit CC's

A Mutual Credit system is a network of local exchange that uses a ledger system or account registry to record credit and debt accumulated by members in their transactions. LETS (Local Employment and Trading Systems) are the most popular form of mutual credit system. LETS typically consist of a set of accounts, usually kept on a personal computer, that

acts like a bank, where each member of the system has an account to which transactions are credited or debited. However, mutual credit systems are not confined to the design of LETS, and might also provide their members with circulating notes to enhance circulation in addition to a ledger or system of accounts for recording the obligations of members. Similar to cash withdrawal being debited against (subtracted from) a bank account, the amount of any notes issued by a member would be debited against their Mutual Credit account. Every account begins with a balance of zero, where the sale of goods or services add to one's account balance and the purchase of goods or services reduce one's balance. Over the long-run individual account balances will fluctuate, some months ending with a credit (positive) balance and some months ending with a debt (negative) balance, with all member's accounts averaging out to a balance of zero. As long as debit balances do not become chronic or extreme, the system, upon which outstanding debt is a necessary feature, can handle these situations. Member accounts, whether credit or debt, do not collect interest, thus eliminating incentives to stockpile the currency, which creates for more effective circulation and more even distribution of resources. The basic idea of a Mutual Credit system is to extend the practice of trade to a wider group of participants; typically individuals that are economically underserved or unrecognized. By entitling members of the system to start off with a negative balance, which is, essentially, a promise to the community that the member will reciprocate their debt by supplying goods or services in return, all members, in effect, become issuers.

Commodity Backed CC's

Commodity backed money is money that holds value within itself. It is not based on faith in government or trust in a community group, but on the value of certain things. An example would be the Liberty dollar, which is backed by silver. Commodity backed currency does not necessarily have to be backed by a single good, but can be backed by many goods, such as Ralph Borsodi's "Constant," which was backed by a market basket of goods and services (ref). This diversity of commodities, Borsodi believed, would reduce the currency's susceptibility to inflation.

Historical CC Examples

Historically, complementary currencies have been very important. They have developed for a number of reasons such as bank failures, community building, war funds, lack of legal tender, or to lessen the severity of a national financial crisis.

In early America, wampum was used to not only trade with the natives, but traded among colonists to deal with the shortage of British currency that made local exchanges difficult. Foreign coins, such as the Spanish Reale, represented a commodity backed currency, which was also used extensively to combat this exchange problem. The Revolutionary War was financed by a currency called the Continental, backed by future anticipated tax revenues. It was invented to pay for the resources needed to create an independent nation and declared illegal by the British. The United States would thus not have been able to develop as an independent nation without complementary currencies and their ability to create exchange and thereby address individual, community, and national needs.

Internationally, there have been many dramatic examples of complementary currencies, most notably during the first half of the 20th century. The town of Schwanenkirchen, Germany, plagued by unemployment and growing public works needs, created a local currency backed by coal from the local mine to circulate goods and services. Jobs were created, taxes paid, and public goods maintained. When the government, threatened by the potential loss of central power, declared the currency illegal, the town fell back to its previous state.

Complementary currencies have historically provided the flexibility needed by communities to survive difficult times.

Survey of Complementary Currencies

We surveyed a total of 38 complementary currencies and assembled the data as shown in Table 1. Each of the characteristics we evaluated for each currency are briefly described below. In addition, we surveyed the special case of Argentinian “nodos” that have grown up in response to the economic crisis there.

Basic Data

Currency: The name of the currency

Location: Where in the world is this currency located

Website

Contact

Start Date: Date currency was started

End Date: Date currency ended if applicable

Type: The type of currency: Fiat, Mutual Credit, Commodity Backed, Historical; (plus subtypes)

Exchange Form: The form in which the currency is exchange such as: script, credit, etc.

Convertability: Is the currency convertible to the US dollar?

Legality: Is the currency legal?

Taxability: Is the currency taxable?

Geographic Scale: The area in which the currency is traded

Control (basis of issuance): Who is controlling the issuance of the currency?

Transaction Costs: Are the transaction costs covered by the organization, if so how

Administrative Costs: Are the administrative costs covered by the organization, if so how and what are they

Method of Cost Recovery: How does the organization recover administrative costs

Interest Rate: What is the interest rate on the currency, if any

Can it be used to pay taxes

Degree of Local Institutional Support: Are there local institutions that are supporting the currency (besides the participating businesses) such as banks, credit unions, or organizations

Purpose for Creation: The reason the complementary currency was started.

Quantity measures

Number of Participants: The actual count (or estimated count) of the number of *individuals* or *businesses* that use the currency.

Participation Rate: The percentage of the total number of *individuals* or *businesses* that use the currency within the area of acceptance (i.e. city boundaries, county boundaries, etc.).

Volume in Circulation: The number of complementary currency units in circulation.

Equivalence: The rate of transfer from U.S. dollar to complementary currency (ratio of \$/CC unit).

Dollar Equivalent Volume: The U.S. dollar value of all complementary currency in circulation.

Value of Transactions per Year: The U.S. dollar value of the business transactions that took place in the complementary currency during a one year period.

Percent of Total Transactions: The percentage of all business transactions that took place in the complementary currency within the area of acceptance.

Quality measures (qualitative info)

Quality of Life Ranking: Has the currency improved the quality of life in the community

Overall Success: An anecdotal account from users in terms perceived success of the currency.

Employment Rate and Poverty Rate: Percentage change in the measures of employment and poverty in the community as a result of the complementary currency's existence.

Economic Stability: Amount of change in economic stability due to the complementary currency.

Trust in the Community: Quantitative or qualitative changes in social capital in the community as a result of the complementary currency.

Best Thing About Currency: Anecdotal accounts from complementary currency participants pertaining to their perceptions of the best feature or benefit of the currency.

Changes/Improvements: Recommendations from currency participants and administrators in terms of areas of potential improvement within the complementary currency system.

Notes: Other notable comments/observations made by survey respondents.

Results

We surveyed 40 community currencies, 17 of which were Fiat systems, 13 of which were Mutual Credit systems, 1 of which was a Commodity Backed system, 4 of which were historical currencies, and an aggregate of the national statistics for Argentinean currencies with 4 individual systems. For each currency, information was gathered on key elements of currency systems to attempt to identify successful features of each currency. These elements included among others the convertibility to the national currency, geographic and demographic scale, volume in circulation, administrative costs and methods of cost recovery. When possible, quantitative and qualitative measures of success were noted. Data was collected through online sources and through personal communications with members of the communities.

What are the major characteristics of the various types of CC's?

We can see from the spreadsheet that the major characteristics of Fiat currencies are that they are not backed, are in script form, are legal, and are taxable as income. The two “Fiat” currencies that are backed, Toronto and Salt Spring Dollars, are actually gift certificates due to the fact that they are convertible to the national currency. According to our data, these Fiat currencies have been confined to a certain geographic scale, mostly to town or city. Fiat currencies often pay for administrative costs through membership fees, monthly fees, or joining fees. Toronto and Salt Spring Dollars’ costs are covered by a fund that allows these currencies to be convertible. Except for these two exceptions, other fiat currencies can not be used to pay taxes, whereas the Salt Spring Dollar is accepted at par because it is supported by the local chamber of commerce, and hence can be used to pay taxes. The fiat currencies in our research were all created because there was a desire to support, promote, and create thriving local economies. The number of participants varies from only a few (40) to several hundred (as many as 500). The “hour” unit, as used by many of the fiat currencies, have an equivalence of 1/10th of an hour equal to \$1USD. Due to the fact that most fiat currencies are not backed by the national currency, it is difficult to keep track of exactly how many transactions and the value of those transactions occur per year in the currencies.

The other main type of complementary currencies we researched were mutual credit systems. The most common form of this system is LETS (Local Exchange Trading Systems). This “currency” is not convertible and is taxable (of course, whether or not the currency is actually claimed and taxed is up to the individual). The geographic scale of the LETS systems in our research varies from a specific island, to town, state, and city. LETS systems are controlled via person to person exchange, through a computer, or an account controller who keeps track of the exchange of credits throughout the LETS system. The purpose of creation for these LETS systems is to facilitate exchange of goods and services between local community members without the need for conventional money. Our data shows anywhere from 30 participants (Rozlet in the Czech Republic) to as many as 200 (Peterborough, Canada). For the most part, 1 credit in a LETS system is equivalent to 1 unit of the national currency (for example, 1 credit in Ottawa, Canada is equal to \$1 of the Canadian national currency (see spreadsheet).

Another type of complementary currency we researched was a commodity-backed currency. A commodity-backed currency, such as the Liberty Dollar, is 100% backed by a commodity (in this case silver). It is 100% convertible to the national currency, is legal, and taxable. The use of the Liberty Dollar is national and international, is accepted by

approximately 1700 associates nationwide, and since 2000 over 2 million Liberty Dollars have been brought into circulation.

Historical complementary currencies have often been created in times of economic need (money shortage, war) and have usually been in the form of script or coins. The historical currencies we researched were not backed by the national currency, and were not taxable. Whether or not the currency was legal or not depended on whether the government acknowledged and supported the use of the complementary currency. It is difficult to judge the usage, volume in circulation, and benefits from the historical currencies due to the technically “illegal” usage of many of them. For example, the Pine Tree Shillings were considered legal tender by the Massachusetts colonial law, but illegal by the English government, making tracking of the use of this currency difficult.

One of the key points that we can take away from analyzing our data is that the overall measures of performance (both quantitative and qualitative) of most complementary currencies are very difficult to assess. Many complementary currencies (such as the Salt Spring Dollar) have allowed for a local community to have lower tax rates, and have been shown to generate more local commerce and community connections (Burlington Bread).

Argentinean “Nodos”

This is a special and interesting case where a large number of new currencies were created as alternatives to the collapsing national currency. They are not included in the spreadsheet, but are described below.

History: These systems originated in Buenos Aires in 1995 as a civic grass roots response to the severe economic stresses of the mid nineties to current. A people led response for and by the underserved or un-served individuals by the formal marketplace. Founding members developed the network as part of an ecological movement known as the Regional Self Sufficiency Program. In doing so, the movement tied ecological principles to the pressing economic issues such as unemployment and growing urban populations.

Structure of the Network: The network has grown from a single group to what is now considered by some as a regional and by others a national organization. It has grown from one organization to an estimated 6,000 trading clubs at its peak, and back down to approximately 1,000 currently. It is estimated that within the current 1,000 trading clubs that there are 300,000 members. In 2001 it was estimated that there was more than \$1 million dollars worth of credits in circulation. There is no formal central office / structure. Rather the network is a loose affiliation of bartering clubs (nodos) that abide by a similar set of principles and that attend semi-regular conventions / trainings. With age, the network is beginning to acquire a more rigid structure. For example, recently nodos have combined to form larger nodos that thereby serve a larger region. Because the members of the network are acting both as producers and consumers they have been dubbed “Prosumers”. The market takes the form of barter fairs, where the formal market currencies of Argentine Pesos and the U.S. Dollars are banned. This is primarily for tax reasons. Alliances from the formal and governmental sectors have been fostered. The largest brewery in Argentina, Quilmes, has lent support to the network. Also, the Department of Social Affairs in Buenos Aires has lent support by providing building / office space to the network.

Currency: The network is a Fiat system, where scripts are traded and backed by nothing more than the members trust in one another and for the system. These scripts have become known as “creditos” or credits. 1 credito was equivalent to 1 Argentine Peso that

consequently was equal to 1 U.S. dollar prior to the devaluation. Upon joining a nodo, an individual is given a small stipend of credits as an incentive to spend, leading to an increase in the rate of market transactions. Currency issues such as inter-group or inter-regional transferability of credits has become a major issue, because they are only backed by a communities trust. Therefore, trading credits across communities has become an issue of cross community trust. Also, lacking a sufficient method to mitigate counterfeiting has resulted in an increase in its occurrence. This has also been tied to severe inflationary pressures, and decreased social capital within some nodos. Some statistics produced by the Municipal Government of Buenos Aires have estimated that in 2001, nearly 1/3 of the minimum wage earned per family is earned within the network, a value roughly equal to \$350. Transactions are officially not taxable because no governmentally recognized currency is being used. However, there has been recent governmental interest to change this.

Gender: 86% are female, 14% are male.

Professions: Includes low unskilled labor, students, entrepreneurs, and professionals. The active population within these systems is diverse, representing nearly all levels of the socioeconomic ladder of Argentina.

Age:

Under 30 years old: represents 28% of participants

Between 30-40 years old: accounts for 14% of participants

Between 40-50 years old: represents 28% of participants

And over 50 years old: coincides with 30% of the participants

Interestingly, this age cohort breakdown clearly illustrates that most of the participating population are at either extreme of the cohorts. This suggests that one can conclude that the economic dependents (young and old) have either been most directly affected by the economic crisis and thereby participate more frequently, or simply participate at relatively higher levels because of social / economic reasons.

Family Situation: The vast majority of participants are married, and 50% have at least one child living in the household.

Employment Status: 58% are unemployed, and 1/3 of those also have an unemployed spouse.

Perceptions on their income from the formal market: 45% respond they live very bad off their income, 30% consider they life pessimistic due to their income level, 18% believe their income level is acceptable, and 7% believe they earn a very good income.

Do they enjoy producing for the markets? 92% respond that they do.

Perception on how individuals rate the current state of the markets: 58% respond that they are somewhat happy, 28% consider themselves very happy, and 14% respond that they are very unhappy.

Conclusions

Our general conclusions from analysis of the CC's we surveyed can be summarized as:

- CC's with 100% convertibility to the national currency (i.e. Salt Springs and Toronto dollars) have been relatively successful in achieving participation, but since they are

merely gift certificates rather than real complementary currencies, their success at achieving the goals of a CC are still rather limited.

- Fiat currencies and mutual credit systems without convertibility have been effective at achieving the major goals of CC's, but at a very limited scale. Their scale has been limited by certain design features (i.e. reliance on printed bills or inadequate electronic accounting systems) and also by the lack of significant participation from local institutions. These two limits often reinforce each other, since inadequate design can limit participation, and lack of participation does not require the structural changes to facilitate larger volumes.
- To "scale up" requires both an appropriate "high volume" design of the currency system (incorporating the "solutions" listed in Table 2) and significant participation from local institutions. An example re-design for Burlington Bread is discussed below.

Table 2 summarizes the major causes of failure of CC's to attain high volume and some potential solutions to these problems. The main causes of failure include lack of acceptance, lack of credibility, high transaction costs, and volunteer burnout (or failure to adequately fund administrative costs).

Below we include more detailed discussion of the features of CC's that affect their relative success.

Convertibility with the national currency has been a successful community-building aspect of some currencies, although those that allow convertibility function more as gift certificates than true CC's. Examples include Salt Springs Dollars, Tlaloc-Hybrid, Caslow Recovery Certificate, Green Stamps, and Toronto Dollars. These CC's are subject to changes in the national currency and risk bank runs to convert to the national currency if the CC falters. Some currencies have been **Commodity-backed**. The idea of commodity backing is to have the currency retain its value regardless of the dynamics of the national currency. CC's that have used commodity backing successfully include Liberty Dollars-silver-backed, Exeter Constant-backed by many commodities, and Wara-Backed by coal). Some CC's are not convertible to the national currency. These include Calgary Dollars, all Mutual Credit and LETS systems, Sintral-fiat, and Time Banking. The main problem with lack of convertibility or commodity backing is difficulty building participation.

Acceptance is always an issue with community currencies. Typically acceptance has been increased when users knew that goods and services *they* needed could be purchased with the currency. This has happened when the important local businesses (Larkin Merchandise Bonds) and local government and even banks have signed on (Salt Springs Dollars, Wara), whereas they have been hurt by a lack of institutional support; from government (Mutual credit, LETS, gift-giving, Time banking, Liberty Dollars), from banks (Calgary dollars, mutual credit and LETS, Liberty dollars, HOURS and green stamps). People want to know that they can use the CC for taxes, rent and/or transit tickets (Calgary dollars, Exeter constant, continental colonial, Wara, Red del Trueque in Argentina. If they haven't been able to (mutual credit, LETS, gift-giving, time banking, liberty dollars, HOURS), their acceptance has been weakened. In some cases town backing even forced acceptance (Salt Springs, Wara), while in other cases the national government banned the local currency (The Waras). Promoting trust in a currency is a challenge as well (Mutual credit, LETS, gift-giving currencies, time-banking). Some (mutual credit, LETS, time

banking) currencies find a skills gap between what services are offered and what is actually needed.

Acceptance is also increased when the currency is easy to use. It has been found that fiat or paper money is **easier** to use than credit hours (Salt Springs, Calgary dollars, Wampum, Manillas, Tlaloc-hybrid, Sintrial-fiat, Liberty dollars, Exeter constant, HOURS) and even a fiat-LETS hybrid was more widely accepted than a regular LETS (Tlaloc-Hybrid). Printed Bills also allow trade to non-members (Salt Springs, Calgary, Tlaloc-Hybrid, Sintral-fiat, liberty dollars, Exeter constant, caslow recovery cert, larkin merchandise bonds, Waras, HOURS, Green Stamps). In fact intangibility has been a sore spot for some currencies (Mutual Credit, LETS, Gift-giving currencies, Time Banking) which can be confusing to consumers or unattractive to businesses. Hard cash does risk wear and tear though and severely limits the volume of transactions.

A printed currency must be difficult to reproduce and/or counterfeit to be successful (Salt Spring Dollars, Wampum and Manillas, Mutual Credit and LETS, Tlaloc-hybrid, gift-giving (Hurreai kippu), Liberty Dollars, Exeter Constant, HOURS, green stamps). Another risk is flight risk. If people leave the system without paying back their debts, the system cannot work correctly. This is particularly a problem in a Mutual Credit, LETS, Gift-giving or time-banking system where there is no limit to indebtedness.

CC's also have to find some way of funding **operational costs**. Some communities use interest generated from reserve funds kept in banks to offset operational costs (Salt Springs, Exeter Constant, Caslow Recovery-8%, Wara-demurrage 2% renewal tax). Some have employed user fees (Mutual credit systems including LETS systems, HOURS). Community currencies often face the question of **Taxing**. Some currencies clearly are not taxable (Mutual Credit and LETS and Time Banking, gift giving). Some have no interest (Salt Springs, Mutual Credit and LETS, Gift Giving) or even negative interest (Wara). (Caslow) had a self-liquidating 2% tax on each transaction.

Some community currencies have been introduced as more of a community-building tool than an economic tool. Some have been connected to **cultural** ceremonies (Wampum, manilas, Gift-giving, Red del Treque in Argentina). Some have been an attempt to define **community** boundaries (gift-giving). Gift-giving and time banking attempt to bring together segregated groups. They also reward time spent on the behalf of others, and encourage reciprocity so to not limit themselves to volunteerism. Some (Gift-giving) currencies encourage gifts that do not need to be repaid, which on the large-scale can mean corporations giving gifts to be used to restore parks and historical sites. (Gift-giving) currencies **encourage contact** with the elderly or are better suited for the elderly, because they give credit to tougher jobs. The over-arching success of these (Mutual credit, LETS, gift-giving and time banking) currencies is that they pay for both community and personal benefits. A problem with some currencies is that they have been isolated or only tested in small communities or neighborhoods (gift-giving, time banking, Exeter constant, HOURS).

In addition, there are some **bonus characteristics** of some currencies that are not frequent in others. Some Mutual credit, LETS and gift giving currencies offer free advertising on the web (i.e. HOURS offers free advertising in a monthly catalogue). (Calgary, Mutual credit, LETS, some gift-giving and Time banking create a work record for users which serves as a resume. Some currencies count as discounts by merchants or can be used in specialty stores (Salt Springs dollar, gift-giving currencies and time banking). Some currencies have had a double purpose or hold messages (Wampum, Manillas, Gift-giving).

Some community currencies have been created as alternative currencies rather than complementary currencies. These are usually currencies that have a political purpose. (i.e. Liberty Dollars and Colonial Continentals) assert that they support freedom and peace by withdrawing from violent government. Some currencies have been formed as part of an **anti-Federal Reserve** movement (Liberty Dollars, Exeter Constant, Waras). Some claim to form a sense of national community (Gift giving, Liberty dollars, Colonial Continentals, Green Stamps). (Red del Treque in Argentina has a broad support base from an ecological group, and ban the national currency at their weekly markets).

Currencies have also been created in times of monetary scarcity. **Scarcity** of the national currency led to the creation of Colonial Continentals, Caslow Recovery Certificates, Larkin Merchandise bonds, Waras, Green Stamps and Red del Treque in Argentina. In such times stores, wholesalers and manufacturers have been forced to accept local currency, since there was a lack of any other. But in times of hardship, CC's have also been used by businesses to pay workers and to avoid business failure (Caslow recovery certif., Waras, Red del Treque).

Circulation of a currency means transactions are occurring and stimulating the economy. The Wara currencies were successful because of a large turnover (circulation) as was the Larkin with \$250,000 in circulation. The Waras' presumed inferiority led to a desire to get rid of it and therefore high **circulation**. Demurrage also encouraged circulation. If a currency is exported, and therefore out of circulation, it can lose value (Wampum). The inherent value of the currency declines if people stop participating (Mutual credit, LETS, gift-giving and time banking) or if the currency is not used for major transactions (Calgary dollars, Mutual credit and LETS, gift-giving, Liberty dollars).

Currencies need **trained professionals** to run well. The all-volunteer staffs of (Red del Treque) have had real difficulty. Time banking requires trained staff to deal with the many needy people entering the system. Currencies that have been copied/transferred from elsewhere have poorly trained workers and poorly organized systems. If too much currency is made, inflation and/or devaluation can occur.

Design of a High Volume, Real CC: Burlington Bread

While several high-volume, real CC's have existed in the past (i.e. the Wara), at the moment none of the more than 4000 CC's in existence really fits the bill. Even the most successful fiat-based system (Ithaca Hours) still operates at a fairly low level. LETS systems are fairly effective, but they are usually very restricted in geographic range and membership. Below we provide a set of recommendations for re-designing Burlington Bread (BB) that we feel would allow it to function as a real, high volume CC. We use Burlington Bread as a case study, but the general principles should apply across the board.

BB is currently a fiat-backed CC based on a printed currency (similar to Ithaca Hours). It funds some of its administrative costs through a membership fee, but relies heavily on volunteers as well. Its members currently include about 125 individuals and 40 small businesses in Burlington, VT. It is run by a board of directors who make decisions about how much currency to print and how to distribute the currency. US dollars can be exchanged for BB, but BB cannot be exchanged for dollars. There are about \$12,000 worth of BB currently in circulation in a city with a Gross Metropolitan Product (GMP) in 2002 of

\$7.45 billion (US Conference of Mayors 2003). BB currently functions as a real, but low volume CC.

The main recommended features of a re-designed Burlington Bread that would allow it to function as a real, high-volume CC include:

1. **Hybrid fiat/mutual credit system** with both paper currency and electronic accounting. The paper currency should be redesigned (via a local art competition) to make it more colorful and harder to counterfeit. The mutual credit component would be handled as an expanded LETS system with a central accounting feature and the ability to use both paper checks and electronic transfer of funds.
2. **Expanded Board of Directors** including representation of all major stakeholders to regulate operations. The expanded board would have several critical new functions, including deciding which participants would be allowed to be “issuers” and in what amounts (see below).
3. **Distinction between “issuers” of the currency and “participants”**, who merely agree to accept the currency. Participants are those individuals, businesses or institutions that have agreed to accept BB in payment for the goods and services they provide and to spend BB on goods and services provided by other participants. Issuers are those participants who have been authorized by the Bread Board to issue new currency into existence by creating a debt (see Appendix 1 for a draft contract). This debt must be backed by a contractual obligation to “repay” by bringing into existence new goods or services of benefit to the community of equal value to the debt. The Board may require collateral to secure the creation of some debts and the contract would specify that the debt must be repaid if the issuer were to leave the system. While all participants benefit from the use of BB, issuers gain additional benefits by essentially being granted “interest free loans.” Because these loans can only be used to purchase local goods and services, they directly stimulate the local economy.
4. **Limited ability to exchange US Dollars for Bread**, but not to exchange Bread for Dollars. This is essentially unchanged from the current system, and allows the CC to function independently of the national currency, while allowing tourists and other visitors to buy in to the system temporarily.
5. **Funding for the majority of administrative costs via “leakage”** of the currency out of the system.. A professional, colorful and attractive currency could become a collector’s item. Some paper currency could be exchanged for US\$ as a souvenir that visitors would take with them when they leave Burlington, and the US\$ that stay behind could finance administrative costs for bread, including Board salaries and overhead costs for an electronic system. Any remaining administrative costs could be funded by fees for issuers and participants in the electronic accounting system.

In addition to the re-design of the currency itself, there are some further recommendations for achieving broad (near 100%) participation, including:

1. Hold a **re-launch event** at the Sustainable Communities Conference in July, 2004. This will provide a highly visible re-start date for BB. Some BB will be given to conference attendees instead of providing lunch and dinner at the conference, and they will be

encouraged to spend the BB at local dining establishments. The conference re-launch event will provide a “step transition” to the new version of the currency.

2. Arrange for **major media coverage** to coincide with the re-launch and to inform the broader public of the existence and advantages of the new BB.
3. **Include major stakeholders on the Bread Board.** As discussed above, this will be necessary to make the currency function well, but it will also be necessary to achieve broader participation.
4. **Hold a round of meetings** with potential issuers and participants leading up to the re-launch. This face-to-face communication with potential participants and issuers will be essential to answer questions and build trust in the system. In initial discussions with some of the potential issuers and participants, a common response was: “we’ll participate if everyone else does.” One can only overcome this objection by getting all the potential issuers and participants in a room together to discuss the issues.

Below we provide some elaboration on a few of the more important elements of this re-designed CC.

Potential “Banking” Features

Only a small percentage of modern money consists of printed notes. Most financial transactions are now done by checks, debit cards, credit cards, and other electronic transactions. In order to get widespread acceptance of Burlington Bread or any CC, it would be advantageous to provide the same convenient forms of money provided by national currencies. Transactions with merchants are typically done with credit/debit cards, while transactions with individuals are often done with checks. We extensively investigated several options for checks and electronic banking including: (1) affiliation with a credit union; (2) affiliation with the University of Vermont “Catscratch” system (a cash card system used by parents to provide limited-use cash to their students at UVM; and (3) an independent accounting system.

Based on this review of electronic banking options, we concluded that the best route is for BB to operate their own electronic accounting system using commercial software readily available from TSA, ACI, Smart Transactions, or other software companies. Smart Transactions is especially affordable and the owner has expressed an interest in working with Burlington Bread. These accounting software systems are very similar to what every LETS or Mutual credit system in the world already uses, so it is not really anything new for a complementary currency to use electronic accounting systems. However, LETS and mutual credit systems are designed to track accounts using the web or telephone, and don’t provide for debit cards or checks as far as we know. Additional research is needed to determine if any LETS systems in operation have made provisions for electronic cards and checks, and have software available. Affiliating with the university CATSCRATCH system might also be beneficial although the costs appear to be quite high.

Having its own accounting software would allow BB to bypass the federal reserve system, and offer most of the electronic conveniences of national currency. We feel this would drastically enhance the acceptability of Burlington Bread.

Discussion

Thus far, the presentation has been rather abstract. To make it more concrete, below we give several example scenarios of how the re-designed BB could be used by various stakeholder groups to solve real, recalcitrant problems in the community.

Underemployment and Livable Wages

One among many social benefits that can extend from widespread use of a local currency in Burlington is its potential to minimize the negative effects of underemployment. Underemployment, is a situation where individuals do not have access to work that allows them to live up to their full productive potential. Underemployed persons may be either unemployed completely, or employed to perform tasks that require less of them than their abilities might offer. In either situation, such persons inevitably face a struggle to maintain themselves in a system that would appear to not have a functional place for them.

The Vermont Peace and Justice Center has viewed underemployment as a vice which manifests itself by hindering peoples' ability to earn a livable wage. Livable wages for a specific region are determined by the costs of living, or the income that is required to meet one's basic needs in that particular area. If a complementary currency were present to boost the volume of capital in the local economy, this would give more people the ability to attain the things they need. According to the Vermont Job Gap Study, a research publication by the Vermont Livable Wage Campaign, only 80% of single workers in Vermont earn a livable wage. When applying the same basic need requirements to households where there are multiple persons to support, the percentage of livable wage earners is even less. The study reveals that the situation for single parents with 2 children is the most crippling, and that only 17% of households in this situation in Vermont earn livable wages.

But how exactly might Burlington Bread repair this situation? Presently, many businesses, both large and small, simply do not have the available capital to provide their staff with livable wages. However, if these businesses were to accept Burlington Bread, then they would find themselves with an accumulation of funds that could be put to use to fill the discrepancy between their own pay rates and what is considered a livable wage for their employees. If money is particularly tight for a business, then the owners and workers might decide that supplementing paychecks with some percentage of Burlington Bread would give employees increased ability to fill their needs locally, while simultaneously avoiding a strain on the business that would result from traditional wage increases.

Filling the income gap is only part of a local currency's potential to negate underemployment. It can further remedy the situation by providing the opportunity for individuals to actually create jobs for themselves when they cannot find work within the larger economic sphere. Simply by joining the system, and agreeing to supply goods or services that are valuable within the community in exchange for Bread, individuals can build employment from the ground up. In this way, complimentary currencies give otherwise unemployed people the ability to generate an income for themselves, which gives them increased ability to meet their basic needs. Bread can enhance peoples' sense of connection and responsibility to one another by facilitating such opportunities for community involvement, thereby increasing social capital.

Community Grants

An ideal scenario for community grants would be one in which a grant was given to a community organization that could help put unused human capital into production. For example, Recycle North might receive a grant of 500 slices to start a training program for people who are simultaneously getting their GED. Recycle North spends those 500 slices buying local supplies and by paying local trades-people to teach their skills to the trainees. The trainees take the skills they have learned and begin to offer goods and services that were not previously in the economy such as appliance repair or carpentry services. They would accept Burlington Bread as a form of payment and use it to buy supplies locally. The trainees are able to supplement their income while they attend classes and work part-time jobs. Thus Burlington Bread has created employment and created business opportunities with unused local capacity instead of waiting for scarce US dollars to fund the project.

The University of Vermont

Local purchasing by the University of Vermont currently amounts to \$6 million dollars and salary expenditures to Burlington residents amounts to \$21 million. There are a number of ways that Bread can be used by the University.

Employees that are willing to accept bread can work with the University to determine what percentage of their salary they would like to receive in bread. Additionally, with liveable wage negotiations occurring, bread could be used to subsidize the disparity in wage earnings.

There are many other services on campus that could potentially also accept bread. Coffee shops, printing and media services and the vending machines could accept bread either in full or as a percentage of the total price.

Also, work-study students should have the option to accept bread as a percentage of their salary. Since students spend so significantly in the Burlington community, this would allow bread to stay in circulation, contributing to Burlington's economic growth.

Lastly, if the University becomes an issuer of Bread it can support capital projects with interest-free loans. These loans could only be spent on local labor, material, and services, but this would greatly reduce the cost of the ambitious building construction plans the University has for the coming years.

Local business vs. Wal-mart

So what will be the impact of a local currency on buying local? Take the case of a low income city resident is employed on a public works project—building local bike paths perhaps. He earns minimum wage in legal tender, but if this is supplemented by an equivalent of \$5/hr. in the local currency he would be able to make a livable wage. The resident has little understanding of the community benefits of buying local, and generally just tries to buy what he needs at the lowest possible price. At his previous minimum wage job, this meant that he did much of his shopping at Wall-Mart. Though Wal-Mart is 12 miles away, it charges 20% less than the more convenient downtown stores. Local currency however is useless at Wall-Mart, and cannot be used to purchase gas. Local stores will accept local currency in proportion to the amount of value that has been locally added to what they sell. Most retailers charge a 30% markup, so even if what they sell comes from outside the region, at least 30% of the price will be payable in the local currency. This means that our low income resident will be able to buy more shopping locally than if he shops at

Wal-Mart. In effect, because of the existence and acceptance of the local currency, local stores can out-compete Wal-Mart.

City Market

Burlington's City Market, a large member-owned co-op in the heart of the city's downtown area, is a crucial player with the potential to significantly strengthen the prolonged success of the local currency by establishing a much needed critical mass. It is primarily a natural foods store, which also serves as a distributor for many local producers of food and other grocery items. City Market provides Burlington residents with many of their basic necessities, which is why many have expressed that they would accept Bread only if this particular business would also. Community members need confidence in the currency, and this confidence comes from knowing that they can use it on things they need on a regular basis. If Bread were able to help people meet their basic needs, then any skepticism about the system would quickly dissolve, and its full potential could be realized.

Affiliation with the currency project aside, the co-op has been an active participant in the process of community building for quite a while, often serving as a gateway for local businesses to reach a wider clientele. Its reputation as an involved community player has helped City Market to establish a loyal base of members and customers, and participation with the Burlington Currency Project would only fuel this sentiment.

There are a number of opportunities for City Market to utilize Bread in its high-volume future. Already, a number of its vendors accept Bread, including several local suppliers of produce, baked goods, and other value-added products. These might later become outlets to allow the co-op to re-circulate the bread it accepts from customers. Like some other businesses that currently accept Bread, City Market could offer its employees the opportunity to receive a portion of their paychecks in Bread, which they could then spend it on their groceries, or elsewhere in the community. Other ways businesses typically spend the Bread that they accumulate include giving bread as change, or as employee bonuses.

Since City Market caters to such a wide audience, it may be reasonable for it to act as an exchange bank for Burlington Bread, so that people who might be curious could buy into the system on a trial basis. In addition to providing yet another outlet for the co-op's currency, this might also be a good way to introduce and integrate non-Bread members into the community network.

Affordable Housing

Affordable housing is a major problem in the city of Burlington. Rents remain high due to low vacancy rates and sale prices of homes are also very high relative to the rest of Vermont. Statistics indicate that in order for a resident to have housing be less than 33% of their total budget, the minimum wage earned would need to be approximately \$13/hour, significantly above the federal minimum wage.

The use of a local currency, such as Burlington Bread, could help alleviate this situation by circulating currency backed by local productivity and supplies instead of using US dollars, which are purposely scarce due to Federal Reserve Policy. Burlington Bread could work in conjunction with the Burlington Land Trust to help lower income Burlington citizens by establishing sweat equity programs with "wages" payable in Bread. Neighborhood work boards could be set up to match those with home maintenance needs with those who have the ability to perform them. This could be done in Land Trust buildings

or through neighborhood associations. With a loan from Burlington Bread, the Land Trust could even construct more houses using community members and in return, agree to accept Bread for payment of service and workshop fees.

Also, the larger landlords in town should be persuaded to accept a percentage of Bread for rent, according to their local spending needs. This would allow local employers to further supplement wages with Bread in response to living wage issues.

Eco-village Financing

The Burlington Currency Project could also act as a “loan granting” entity, using Burlington Bread to help fund local community projects that increase the ecological and social sustainability of the Burlington area. Such projects might include, for example, the University of Vermont eco-village, a project dedicated to sustainable community development and alternative living.

A certain number of Burlington Bread dollars or credits would be issued by the Burlington Currency Project and given to the eco-village community. The eco-village would then use that money to employ local contractors, to cover labor costs, and to purchase local material supplies. This would provide an interest free loan to the eco-village allowing residents to develop a more flexible payment plan suited to the needs and financial abilities of the members of the community, and also would encourage the support of local businesses and the stimulation of the local economy. The eco-village would agree to accept Bread as payment for produce at farmer’s markets, for rent, and for any other goods and services they have to offer until enough Bread has been accepted and paid back to the Burlington Currency Project to cancel their debt. The eco-village could develop a monthly or yearly pay back plan so that the loan would clear over a reasonable time frame.

A similar situation occurred in Ithaca New York in May of 2000. Ithaca Hours gave out a loan the equivalent of 30,000 U.S dollars to help fund the construction cost of the new Alternative Federal Credit Union buildings in Ithaca. It paid for 5% of the construction costs including plumbing, carpentry, electrical work, and other contracting services (Glover, 2000). The loan is being paid back over a ten-year period in half Ithaca Hours and half U.S. dollars (Greco, 2001).

Alternative currency loans have the potential to empower communities to take action instead of being held back by conventional monetary restraints. They provide the means for projects that would otherwise be left undone.

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Table 1. Spreadsheet

Table 2. Summary of causes for failure of CC's and potential solutions

Causes of failure:	Solutions
Lack of acceptance (catch 22—no one accepts it because no one accepts it):	Must reach critical mass, greatly facilitated by institutional support. Members allowed right to seigniorage (or interest free loan, which is approximately equivalent) Must be credible Must have low transaction costs
Lack of credibility	Must be backed by goods and services. Local Government backing by tax receipts is ideal. Must be high quality, not prone to counterfeiting? Need a contract that limits amount “issuers” can issue to amount they can pay back, and demands repayment upon leaving system.
High transaction costs	Paper currency Plastic “Banking” service
Volunteer burnout	Must have way to finance administrative costs. User fee or leakage.

Figure 1. Graph of the number of complementary currencies in existence from 1984 to 2003 (from Lietaer 2004)

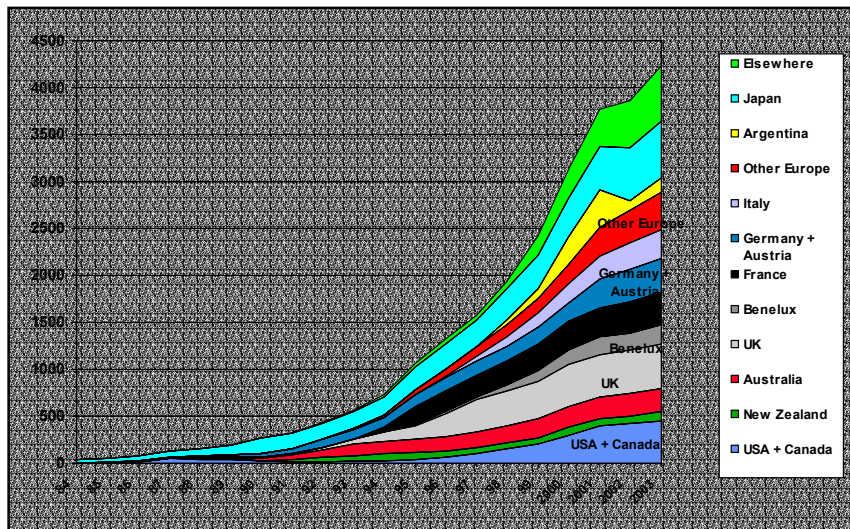
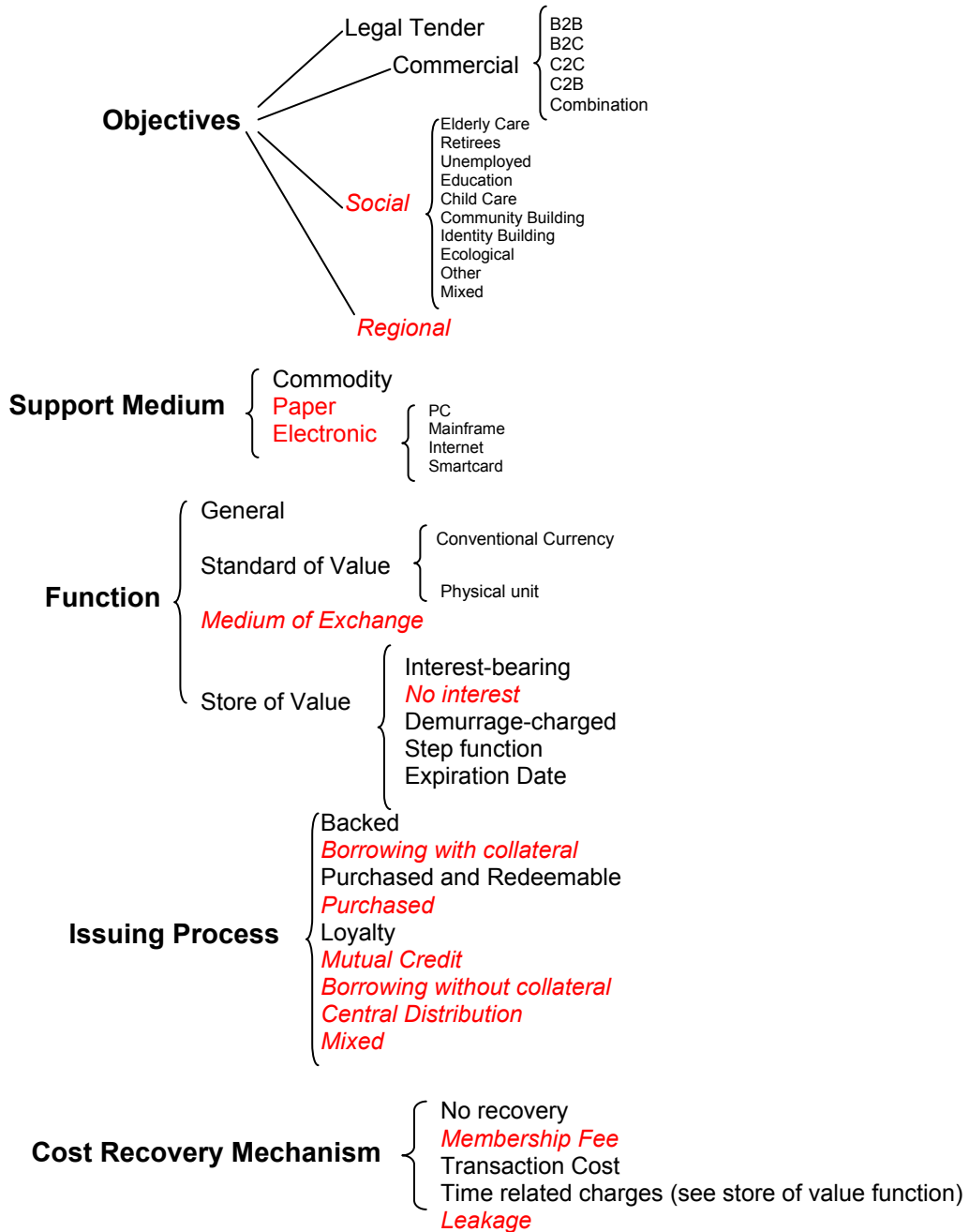


Figure 2. A typology of characteristics of currencies (from Lietaer 2004). *Italics* are characteristics of redesigned Burlington Bread.

A Typology of Currency Systems



Appendix 1

DRAFT Burlington Bread Issuer Contract

Section 1 Issuer Guidelines

Burlington Bread participation can be at two levels: issuer and participant. Issuer is defined as any party that has signed this contract and met qualifications as determined by Board of Directors and been approved by Board of Directors. Participants are defined as members of the general community who engage in transactions facilitated by Burlington Bread but are not approved to issue the currency into circulation.

The amount of the annual fee to be paid by Issuers is decided upon yearly by the Board of Directors.

Issuer agrees to make available goods and/or services to other BURLINGTON BREAD Issuers/Participants in exchange for Bread. Although Bread shall not be considered as a security or legal tender by either BURLINGTON BREAD or its Issuers, and may not be converted to cash, it is expressly understood that for all purposes of valuations, one slice of Bread is equivalent to one dollar in United States currency.

Section 2 Issuance Guidelines

Issuer agrees to accept, as a minimum, the amount of Bread that they have been issued.

Issuer understands and agrees to accept BURLINGTON BREAD as full or partial payment on goods/services offered. On any individual transaction the amount may be negotiated between the buyer and seller on part cash/part Bread basis.

Credit, when and if extended, by BURLINGTON BREAD to Issuer is at the sole discretion of BURLINGTON BREAD according to guidelines and is due and payable on demand as provided.

Issuer agrees that in the event of bankruptcy, insolvency, relocation, or failure of the issuer's business or corporation all outstanding issues of Burlington Bread will be repaid immediately.

Section 3 Legal

Issuer agrees that transactions between Issuers and/or participants are entered into on a voluntary basis. BURLINGTON BREAD is not responsible for the quality, timely delivery, warranties, or any other problems which arise with respect to goods and services traded by Issuers/Participants of BURLINGTON BREAD. Issuers/Participants should exercise the same diligence in entering into a transaction as ordinary business transactions for cash. BURLINGTON BREAD assumes no liability for damages of any kind, including, but not limited to, compensatory and consequential damages, which may result from, trade transactions and/or use of the quality of products and services. Issuers/Participants will indemnify and hold BURLINGTON BREAD harmless from any and all claims, suits, and damages arising out of trade transactions or the quality or use of the products and services.

Issuer hereby gives and grants permission to BURLINGTON BREAD to promote Issuer's business or service to other BURLINGTON BREAD Issuers/Participants and the public through both written and verbal means.

All transactions are taxable if they occur within the normal course of business. Issuers/Participants are solely responsible for any tax consequences resulting from transactions. BURLINGTON BREAD will comply fully with all applicable local, state and federal laws. Issuers/Participants shall not hold BURLINGTON BREAD liable for the payment of taxes and tips, should any dispute arise. It is not to be interpreted at any time that BURLINGTON BREAD is responsible for collection of the tax on behalf of its Issuers/Participants.

BURLINGTON BREAD does not assume responsibility for lost, stolen, or expired slices from any business.

Issuer understands that all listings and Issuers in the BURLINGTON BREAD Directory are subject to change without notice.

Renewal

BURLINGTON BREAD will automatically renew current BURLINGTON BREAD Accounts annually at annual rate determined by Board of Directors unless Issuer notifies BURLINGTON BREAD in writing of its intention not to renew at least thirty (30) days in advance of their anniversary day.

Issuer understands that he/she may cancel this agreement at any time upon thirty (30) days written notice. Upon cancellation Issuer must prepay all cash fees. If the account is overdraft, Issuer may not cancel until account is paid in full.

Any use of BURLINGTON BREAD to facilitate a transaction by a BURLINGTON BREAD Issuers/Participants constitutes acceptance of all terms and conditions of the Rules as most recently adopted by BURLINGTON BREAD. Any purchase or sale by a BURLINGTON BREAD Issuers/Participants which makes use of BURLINGTON BREAD after the (30) thirty day notice constitutes acceptance by the BURLINGTON BREAD Issuers/Participants to the rules and agreement of the member to abide by the same.