7

THE ROLE OF BIOREGIONAL CURRENCIES IN REGIONAL REGENERATION

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This essay will focus on complementary currencies as a necessary ingredient for the success of regional regeneration, particularly via the creation of tighter human networks.

We will start by looking at the bigger picture that explains why such regional regeneration has become so important today. Next, we will provide two case studies which explain the role of currency in this process, giving both a negative example and a positive one. We will conclude by giving a conceptual framework explaining the findings from the case studies.

The Big Picture

There is a general consensus that we are swiftly moving from the Industrial Age into a Post-Industrial Age. The historical precedent for a process of this scale is the momentous shift from the Agrarian to Industrial societies, which took place in Japan at the Meiji Restoration. Such shifts are not painless: look at what happened to the farmers when the agrarian age was ending; or to the landed gentry that saw their values, power and traditions fade into irrelevancy. Similarly, the over-hyped Dawn of the Information

Age or Knowledge Age has as its underbelly the End of the Industrial Age. It is just a question of perspective.

We have heard a lot—too much actually—about the positive aspects of the Information Age, but there is definitely no consensus on how to reduce the pain of the transition out of the old development model. The one certainty is that such a transition will imply a rapid and unpredictable change. In other words, we have entered *The Age of Uncertainty*.[1]

As long as the assumption that we were living in an environment that is both predictable and controllable was valid, it made sense to centralize information and leave the decisions to *experts*. The most coherent management structure in such circumstances is the traditional command and control hierarchical structure, which is now almost ubiquitous. This structure dates actually from the Roman legions, more than two millennia ago. By now, it has become so habitual that we may not even think that other ways of organizing ourselves are available and could be more effective. However, if breakdowns and crises continue to spread to more and more domains (such as government, medical care, environment, jobs, money, and the like), if the transition toward an information economy becomes indeed an Age of Uncertainty, then the time is ripe to reconsider the old assumptions. Under such circumstances, holding on the old expert driven hierarchical solutions through command and control structures will predictably kill the needed innovations.

Old Environment (Mature Industrial Age)	**New Environment (Post-Industrial Age)**
Predictability and Control Assumed Intelligence and Information Centralized Expert driven solutions Command and Control Structures	Structural Changes Assumed Intelligence and Information Distributed Many agents experimenting new patterns Complex Adaptive Structures

If this analysis of our on-going transition is valid, it should be understandable why universal solutions applicable across entire nations to solve issues like unemployment, social care, education, health and many others, are starting to fail all over the industrial world.

That is why the questions addressed in this essay on regional regeneration and network creation are so relevant today. The core thesis of this chapter is that *regional regeneration requires regional currencies* to be successful, the way plants need water. It is a necessary condition—although not a sufficient one—to obtain the desirable results.

Rather than start from theory, we will begin by using two real-life case studies. First a negative example: how regional sustainability has been destroyed by the purposeful introduction of a monopoly of a centralizing national currency. Next, a positive example will show how a regional currency has successfully strengthened a regional economy.

A Negative Example: How to destroy regional sustainability

Britain colonized the Gold Coast (today the coast of Ghana) during the 19th century. When in 1896 this colony was expanded towards the interior as the protectorate of Sierra Leone, it was faced with an interesting problem. At the time this hinterland was inhabited by hundreds of perfectly sustainable communities, each within its own traditional region. The Africans lived in a cashless society and earned no wages. They did trade amongst each other; however such trade occurred within closed circuits established by tradition among the different tribes.

But what is the point of having a colony if the people there don't need any of your goods? The question was how to break up those centuries-old regional patterns to create a demand for the goods the Britain was eager to export to their colony?

The solution was not to start a big advertising or marketing campaign. It wasn't even to try to prohibit the old exchange patterns or use military coercion to create new ones. It was a lot cheaper, simpler and more elegant than all that.

The British simply introduced a centralized *national currency* and in 1898 instituted a very modest *hut tax* (3 shillings per year) that was payable only in that currency. The official excuse for this tax was to pay for the protection provided to the tribes. That this was a transparent excuse is obvious by the fact that whites (who really needed the protection) remained tax-exempt until 1921.

But *presto!* Within a few years, all the traditional regional systems collapsed. Why?

Every *hut*—every extended family unit in the country—needed to find a way to earn some of this new currency to pay their hut tax. That could only be done by trading outside of the traditional framework in the new *national* system. That was sufficient to break up the sustainable regional patterns.

The lesson should be clear: trying to encourage local or regional development while simultaneously keeping a monopoly of a national currency is like treating an alcoholic with a prescription for gin.

It is also surprising that, while 19th century colonial administrators knew perfectly well how to destroy regional sustainability by imposing a national currency, our collective money blind spot is now so universal that even the policy makers, who talk about the desirability of more regional autonomy, completely overlook the monetary implications of their statements.

A Positive Example[2]

Our second example, operating now for nearly 40 years, comes from a modern city environment in Brazil. In 1971, Jaime Lerner became mayor of Curitiba, the capital of the southeastern state of Paraná, Brazil. He was an architect by profession. Quite typically for the region, the urban population had mushroomed from 120,000 people in 1942 to over a million when Jaime became mayor. By 1997, the population had reached 2.3 million. Again, quite typically, the majority of these people lived in *favelas*, the shanty towns made out of cardboard and corrugated metal.

One of Jaime Lerner's big headaches was garbage. The town garbage collection trucks could not get into the favelas because there were no streets wide enough for them. As a consequence, garbage just piled up, rodents got into it, and all kinds of diseases broke out. A mountain-sized mess.

Because Curitiba didn't have the money to apply *normal* solutions, such as bulldozing the area and building streets, Lerner's team invented another way. Large metallic bins were placed on the streets at the edge of the favelas. The bins had big labels on them which said: glass, paper, plastics, biodegradable material, and so on. Anyone who brought down a garbage bag full of presorted garbage was given a bus token. A school-based garbage collection program also supplied the poorer students with notebooks. Soon the neighborhoods were picked clean by tens of thousands of kids, who learned quickly to distinguish between different types of plastic. The parents used the tokens to take the bus downtown, where the jobs are.

What Jaime Lerner did, from my perspective, is invent Curitiba money. His bus tokens are a form of local complementary currency. His program, "Garbage which is Not Garbage," might as well have been baptized, "Garbage which is Your Money." Today, seventy percent of all Curitiba households participate in this process. The sixty-two poorer neighborhoods alone exchanged 11,000 tons of garbage for nearly a million bus tokens and 1,200 tons of food. In the past three years, more than 100 schools have traded 200 tons of garbage for 1.9 million notebooks. The paper recycling component alone saves the equivalent of 1,200 trees each day.

What began as a garbage and public health problem became a way to solve public transportation and unemployment difficulties in a uniquely innovative way. The secret is not that this city or population has something unique, but that an integrated systems approach used *complementary currencies* to tackle the problems at hand.

The impact of these complementary currency systems is identifiable in conventional economic terms. The average Curitibano makes about 3.3 times the country's minimum salary, but his real income total is at

least 30% higher than that, about 5 times the minimum salary. This 30% difference in income is derived directly from non-traditional monetary forms, such as the food for garbage program. Curitiba has by far the most developed social programs in Brazil, and one of the country's most vibrant cultural and educational programs; yet its tax rate is no higher than that of the rest of the country.

Even at the macroeconomic level there are clear indications that something unusual is going on in Curitiba. The Domestic Product of Curitiba increased between 1975 and 1995 by around 75% over that of the entire state of Paraná and 48% more than Brazil as a whole. Such difference in growth rate has continued in the recent past. Between 1993 and 1995, Curitiba's Domestic Product grew 41% faster than the state of Paraná and 70% faster than Brazil's.[3]

Curitiba is a practical case study, with 40 years of experience showing that using *both* the traditional national currency and well-designed local complementary currencies is beneficial to everybody, including people who are focused exclusively on the traditional economy denominated in national currencies. It enabled one Third World city to join First World living standards in one generation's time. In 1992, Curitiba was awarded the title of "the most ecological city in the world" by the United Nations.

Note that Lerner's team did not start off with the idea to create a complementary currency. *What happened instead is that they used an* integrated systems *analysis for all the major issues at hand, and spontaneously ended up creating a complementary currency to solve them.* Jaime Lerner was elected mayor of Curitiba three times by a landslide, then Governor of the State of Paraná twice.

Relevant Lessons

The Ghana case study shows that when a centralizing currency is given a monopoly as the medium of exchange, particularly via a legally enforced tax obligation, it will produce a powerful countercurrent to any attempt at regional autonomy. The Curitiba case study reveals that a dual currency approach—the conventional national currency combined with a local or regional one—helps substantially in creating a balance between the regional and the broader economic systems. The main lesson we take from both case studies can be summarized as follows: a regional currency is a *necessary but not a sufficient* condition for a sustainable and vibrant regional development to occur. We obviously do not claim that dual currency systems are a panacea to solve all problems—economic, social, cultural, environmental, or otherwise. But the point should be clear that dual currencies *can* make a big difference.

Other Historical Precedents

The idea of introducing regional currencies to foster regional development may sound revolutionary to many people. But in fact, it is a very old one that happens to have fallen out of fashion only over the past two centuries. Recent research[4] has revealed that—contrary to a widespread prejudice—the history of regional currencies has not only been long, but also one mostly of success. The gradual generalization of the gold standard during the 19th century and the concomitant imposition of national currency monopolies suppressed these smaller scale regional systems.

The "Money Blind Spot"

Our national currency system is considered to be *value neutral*—that is, it is not supposed to affect the kind of transactions that are performed, or the relationships among the people using it. This hypothesis has been embedded into economic theory since the days of Adam Smith, and has remained by and large unchallenged until today. Indeed, it doesn't matter whether one uses Euros, dollars or Yen in one's transactions: they are all currencies of an identical nature, created as bank-debt bearing interest. More important still, economists are in agreement that bank-debt currencies derive their value from scarcity relative to their usefulness.[5] In other words, for modern money to function, scarcity has to be artificially and systematically maintained to avoid inflation.

The hypothesis of value neutrality is simply not valid when one compares behaviors or relationships among users of currencies that are created by rules different from those underlying today's conventional money system. There seems to be a general blind spot on this issue, even though several studies have already proven it with facts. For instance, significantly different behaviors have been detected in commercial exchanges using barter currencies or loyalty currencies as opposed to conventional money.[6] Even stronger are the differences in relationships when people use social purpose local currencies instead of national money. For instance, Japanese elderly using the services paid in an elderly care currency *Fureai Kippu*[7] (caring relationships tickets) as opposed to professionals paid in Yen tend to prefer services provided by people paid in the complementary currency *because the relationships are different*. Similarly, studies of German Local Exchange Systems (LETS)[8] systems reveal that paying *friends* for services rendered with LETS units is significantly more acceptable than paying them with national currency.

Here we will focus on the difference that the use of national *vs.* regional currencies makes in terms of regional autonomy and regeneration.

Defining our Terminology

To better explain the role of regional currencies, we should start by defining our terms.

While economic theory always defines money in terms of what it *does* (its functions as a standard of value, medium of exchange, store of value), it never defines what it actually *is*. We define *money as an agreement* within a community to use something as a medium of exchange. The community can be the national one (as is the case with conventional national currencies), a global one (as is the case with the dollar since the Bretton Woods agreement in 1945), a local one (as is the case for Curitiba's bus tokens), or a regional one.

Complementary currencies are agreements within a community to accept something other than legal tender as a means of payment. Their role is to link unmet needs with otherwise unused resources. There has recently been an explosion of the number of such systems all over the world, as illustrated in Figure 1.

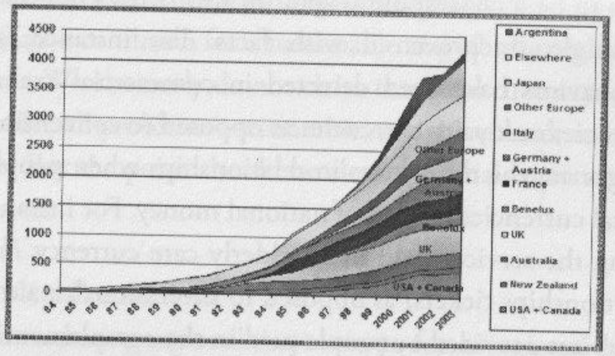


Figure 1: Number of complementary currency systems in a dozen countries (1984-2004)

Full details are available elsewhere about the variety of the purposes and technicalities of these systems,[9] and about the psychological and social implications of such currencies.[10]

We will define a *region* as a geographical area with which people tend to identify themselves, because of history or other reasons. In this sense, the physical size of a region is less important than the potential density of human interactions, their *pride of belonging*.

A *bioregion* is created by the natural organization of biological life on the basis of geographical features such as watersheds, climate, and natural physical boundaries (such as rivers, mountains, valleys, forests). This concept has been supported over the past decades by a substantial body of literature.

A *metropolitan bioregion* integrates two key systems—a bioregion and a city—that should be of interest to integral planners.[11] Jane Jacobs[12] has argued convincingly that the city region is the basic unit of human economic activity, as it is the unit within which natural resources and the human divisions of labor combine to address a full range of human needs.

From the perspective of planners, it makes sense to view their effective integration as a primary goal for planning a sustainable world. Often, the bioregion and the city region are overlapping entities anyway.

The Metropolitan Bioregion as Planning Unit for Regeneration

The proposal here is to use a *metropolitan bioregion as the ideal unit for designing regional regeneration* strategies, and to design a complementary bioregional currency specifically for such units. Specifically, a *bioregional currency would be a complementary currency that aims at bringing together unmet needs with unused resources, those that are produced in the region both by humans and by nature.*

In practice, this would mean systems that are designed to operate on a scale larger than the purely local one, as tends to be the case for LETS, Time Dollars, Fureai Kippu or other smaller scale systems—those typically included in Figure 1. Local systems do not tend to scale up beyond a thousand people. For example, one of the largest LETS worldwide—the Blue Mountains LETS near Sydney, Australia—counts about 1,000 active members. At the other end of the spectrum, as on a national level, millions or perhaps hundreds of millions of people are typically involved. A *regional currency system* should be able to operate on a scale or at a level between these two extremes: serving 10,000 up to an order of magnitude of one million people for example. Over forty of such systems are in operation in Germany under the name of *regiogeld*.

All regional economies are currently trying to produce for international trade, and with our proposal they would still want to do so. Everyone wants to be part of the globalizing economy. It is true now, as it was in the time of Adam Smith that being a net exporter is a strategy for achieving faster economic growth. However, it is also true that becoming a net exporter is an extremely competitive undertaking. This prescription ignores the logical requirement that a positive balance of trade by one country or area requires a trade deficit in some other place, and thus is an inherently unstable arrangement.

A community that imports more than it exports will tend to have a liquidity problem, especially if it is also sending its savings to financial centers not investing in the community that is the source of the savings/capital. This problem is particularly acute in rural communities and inner city poverty zones, or during periods of recession or unemployment in a region. Most income is rapidly spent on imported commodities and goods. Jane Jacobs suggests that tying all of the city regions in a country to a national macroeconomic policy is like connecting the respiratory systems of all of the spectators and players at a tennis tournament to one central nervous system. The result would require all players and spectators, whether resting, sitting, or actively playing, to function at one average level of respiratory activity.

Conceptual Framework

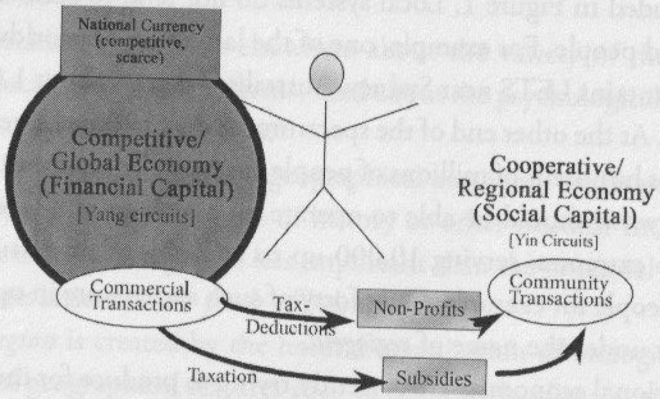


Figure 2: Global Economy and Regional Economy under a Monopoly of National Currency

Figure 2 depicts the flow of currency in the case of a monopoly of a central national currency. On one side is the global competitive economy, the one where commercial transactions are facilitated through the national currency, often in a relatively impersonal manner. It is also the space where

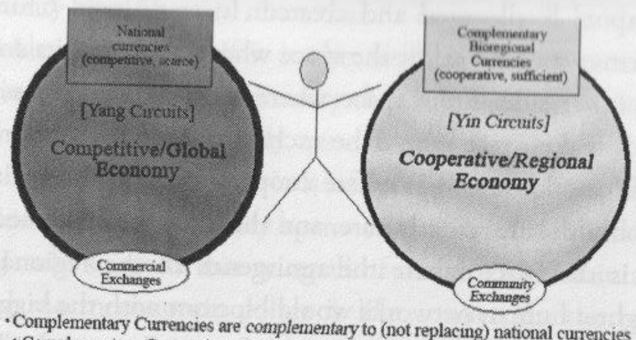
financial capital is allocated and created. In traditional Chinese philosophical terms we could call it the space where *Yang* circuits are active.

On the other side is the space where most of the *Yin* activities are expressed. It is the space where the exchanges tend to be more personal, with people one knows. It is where cooperation and the social sector—education, health care, elderly care, and the like—build up social capital. Finally, it is the space where the resurgence of the regional economy through tighter human networks would blossom with the biggest impact.

The social sector by nature needs to be financially supported by the rest of society. When a monopoly of the national currency is compulsory, and the regional economy isn't a net exporter to the competitive economy, the only way money becomes available to the regional/cooperative economy is through government subsidies (paid by taxes) and transfers via non-profit organizations (funded through tax deductions). Taxes have never been popular. The net result is that the Yin space is always starved of the medium of exchange. This is particularly a problem for regional economies where the social sector is almost entirely based in regional economies.

As a result, the community transactions in the economy are always suffering from insufficient liquidity to actualize all of the potential transactions that could meet human needs with available resources. Thus the regional economy suffers from chronic underutilization of its productive capacity. Complementary regional currencies can be designed to assure adequate liquidity in the regional economy. They can also be designed to make important contributions to social services and environmental sustainability. Finally, today's cheap decentralized computing also makes such parallel payment approaches very cost-effective.

A number of groups are already addressing the problem of scarcity in medium of exchange by agreeing to use a complementary currency created for specific purposes. What complementary currency systems do is foster the regional economy with its own cooperative currency, created in sufficiency. This idea is graphically presented in Figure 3.



· Complementary Currencies are *complementary* to (not replacing) national currencies
· Complementary Currencies create ADDITIONAL Wealth, Work, and a safety net below official system

Figure 3: Global Economy and Regional Economy when National and Complementary Currencies are both Operational

In short, conventional money is still needed in both circuits, but a scarcity of the national currency will have less negative consequences when it is complemented with a bioregional currency.

Conclusion

We have analyzed, in light of the transition to a post-industrial society, why it has become critically important to regenerate regional economies and the human networks that support them. Our thesis is that in order to achieve that aim, regional currencies will be needed. The ideal unit for planning such systems is the metropolitan bioregion, a natural unit that incorporates a city and its ecological hinterland. Furthermore, we have explored the importance of liquidity in assuring the health of regional economies.

By focusing on metropolitan bioregions, together with the possibilities for designing complementary currency systems, we've seen new horizons opening up for solving the socio-economic and ecological problems brought in a globalizing economy.

Whom Shall We Trust to Create Our Money?

The study of money, above all other fields in economics, is the one in which complexity is used to disguise truth or to evade truth, not to reveal it. The process by which banks create money is so simple the mind is repelled.

John Kenneth Galbraith, 1975

History records that the money changers had used every form of abuse, intrigue, deceit, and violent means possible to maintain their control over governments by controlling money and its issuance.

James Madison

Men rise from one ambition to another; first they seek to secure themselves against attack, and then they attack others….

The fear to lose stirs the same passions in men as the desire to gain, as men do not believe themselves sure of what they already possess except by acquiring still more; and, moreover, these new acquisitions are so many means of strength and power for abuse.

Niccolò Machiavelli

Neoliberalism is the defining political economic paradigm of our time—it refers to the politics and processes whereby a relative handful of private interests are permitted to control as much as possible of social life in order to maximize their personal profit…. These parties and the policies they enact represent the immediate interests of extremely wealthy investors and less than one thousand large corporations…. At their most eloquent, proponents of neoliberalism sound as if they were doing poor people, the environment, and everybody else a tremendous service as they enact policies on behalf of the wealthy few.

Robert W. McChesney

If Congress has the right under the Constitution to issue paper money, it was given them to use themselves, not to be delegated to individuals or corporations.

Andrew Jackson

The Government should create, issue, and circulate all the currency and credits needed to satisfy the spending power of the Government and the buying power of consumers. By the adaptation of this principle, the taxpayers will be saved immense sums of interest. Money will cease to be a master and become the servant of humanity.

Abraham Lincoln

Issue of currency should be lodged with the government and be protected from domination by Wall Street. We are opposed to... provisions [which] would place our currency and credit system in private hands.

Theodore Roosevelt

The real truth of the matter is, as you and I know, that a financial element in the large centers has owned the government ever since the days of Andrew Jackson.

Franklin D. Roosevelt, 1933

When a government is dependent upon bankers for money, they and not the leaders of the government control the situation, since the hand that gives is above the hand that takes.... Money has no motherland; financiers are without patriotism and without decency; their sole object is gain.

Napoleon Bonaparte, 1815

The bank hath benefit of interest on all monies which it creates out of nothing.

William Paterson, founder of the Bank Of England in 1694

Money is a new form of slavery, and distinguishable from the old simply by the fact that it is impersonal—that there is no human relation between master and slave.

Leo Tolstoy