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A NEW APPROACH TO A TYPOLOGY OF COMPLEMENTARY CURRENCIES

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ABSTRACT

Well over 5,000 complementary currency systems have been established worldwide to date. They range from very large systems, such as the WIR-Cooperation Ring, to small neighbour to neighbour exchange circles. Such a diverse range of currency types has developed that it is almost impossible to get an overview of the whole field. This article attempts to strip CC money down to its basic features and then develop a typology of the various complementary currencies. An important foundation for this is the work of the independent American scholar Edwin C. Riegel (1879-1953), who developed his own perspective on money that is still not accepted by mainstream scholarship. This work was revived and further developed by Thomas H. Greco, a contemporary monetary thinker. Another basis is the consideration of money as a purpose-driven means for the organization of human relations.

The article presents an evaluation system that enables the characterization of the vast majority of complementary currencies. The typology derived from it allows for a clearer characterization of the individual systems than was possible with previous approaches.

This article is an excerpt from a thesis on complementary currencies by the autor in The Institute for Research on Management of Associations, Foundations and Cooperatives (VMI) at the Economic and Social Sciences Faculty University of Fribourg/Switzerland.

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INTRODUCTION

This article is a slightly revised excerpt from the Master's thesis Typology of complementary currencies and success factors for complementary currency organizations by Jens Martignoni (Martignoni 2011) in the Institute for Research on Management of Associations, Foundations and Cooperatives (VMI), the Economic and Social Sciences Faculty at the University of Fribourg, Switzerland. Eighteen organisations issuing complementary currencies across the German speaking countries of Europe were examined for the thesis. A few of these currencies are cited as examples for the proposed typology. Reference is made to the original work for detailed investigation of the organizations.

A first excerpt of this work-in-progress was presented to an expert audience at the first Wittener conference organized by Coinstatt in September 2010. This and other contributions were published in the conference proceedings as „Different: Complementary Currencies" (Krause: 2010). Further work on the typology, right up to its inclusion in the Master's thesis, led to some additions, minor corrections and enlargement of the originally sketched-out approach. The recently published article by Jérôme Blanc (Blanc: 2011) on the classification of complementary currencies was not available when this typology was worked out. Thus reference to its content remains a task for future discussion.

This version should also reach an international audience of experts through this English translation. It is intended as a contribution to a systematic assessment of both complementary currencies and currencies in general and it is the author's hope that it stimulates a more in-depth discussion.

1. WHY A NEW TYPOLOGY OF COMPLEMENTARY CURRENCIES?

How can complementary currencies be categorized? Surprisingly, there are only a few coherent classification systems on the subject in the literature and these mostly start from the traditional understanding of money taught by economics, which can hardly capture the special features of modern complementary currencies. Here we shall attempt to produce a coherent and accessible typology of the variety of contemporary complementary currency systems, based on a different understanding of money. The proposed foundation is in need of further development and improvement but demonstrates an original way of thinking and also enables a new view of how currencies in general are conceived.

1.1 Existing typologies

The search for an existing typology of monetary systems, which is also applicable to the field of complementary currencies, is not very fruitful. Even in the field of mainstream economics, amazingly little work has been done on the various forms of money and a complete classification scheme of design choices for the architecture of money systems does not seem to exist yet. Instead, the functions of money are mostly viewed in a macroeconomic context. More essential principles of various monetary systems are to be found in the fields of ethnology and historical research into coinage (numismatics). However these principles are not readily carried over to modern credit and bank giro systems. Only a few simple divisions, schemes or ordering grids for complementary currencies are to be found in the relevant German literature and they are mostly derived from the typologies of the German Regional Money Association and Kennedy/Lietaer (2004) presented later.

Other approaches originate from the field of 'Free Money', the movement inspired by the money-reforming aspirations of Silvio Gesell. Some approaches also come from an ethnological direction.

1.1.1 Economic classifications

When discussing money, most economic textbooks limit themselves to the functions of money, the material differences or appearances of money. A general typology of currencies is not given. The official (national) currencies of the world have become very much aligned with each other in the last 100 years. Only in special cases are various types distinguished.

According to the commercial value of the currency
- Soft currency
- Hard currency

According to material criteria
- Natural money (eg shell money, whale teeth, etc.)
- Coins/Metal money
- Notes/Paper money
- Giro money

According to backing
- Metal backing (Gold/Silver)
- Fiat-Money (money created „from nothing")

1.1.2 Typology of the German Regional Money Association

The Association for German Regional Money Organisations, the Regiogeld e.V. (www.regiogeld.de), has produced its own quality standards and criteria for regional money but does not make any statements about a classification system or typology. However, in the practice of the association and in the accompanying scientific work (for instance Spanknebel (2006) or Bickelmann (2009), two clear types of regional currency are distinguished, according to their issuance mechanism or ‚backing':

- Euro backed regional monies: Euros are exchanged for regional money vouchers. The corresponding worth in Euros is deposited in an account as backing for any later repayment.
- Service backed regional monies: regional money vouchers are issued against a ‚promise to give service', mostly by businesses but also by people in exchange circles.

Table 1: Typology of currencies after Kennedy / Lietaer (2008)

MAIN CLASSIFICATION	SPECIFICATION	FINER GRADATIONS
Purpose	Legal tender	
	Commercial purpose currencies	B2B (business to business)
		B2C (business to customer)
		C2C (customer to customer)
		C2B (customer to business)
		Hybrid forms
	Social purpose currencies	Elderly care
		Pensioners
		Unemployed
		Education
		Babysitting
		Social contact
		Cultural identity
		Ecology
		Other social objectives
		Hybrid forms
Medium	Commodity money	
	Coins	
	Paper	
	Electronic money	
	Hybrid forms	
Function	General means of payment	
	Money as a measure of value	Payment in conventional currency
		Payment in units of time
		Payment with concrete objects
	Money as a medium of exchange	
	Money as a store of value	Interest-bearing currencies
		Interest-free currencies
		Currencies with user fee
		Currencies with a specific value in units of time
		Currencies with expiry date
		Hybrids
Money creation process	Currencies with real backing	
	Secured loans	
	Unsecured loans	
	Redeemable vouchers	
	Corporate vouchers	
	Customer loyalty currency	
	Mutual Credit	
	Central issuance (fiat)	
	Hybrid forms	
Cost recovery	No additional cost recovery	
	Fixed fees	
	Transaction fees	
	Interest charges, demurrage and other time-dependent charges	
	Hybrid forms	

- A third type is called a hybrid system, which aims to issue some of its otherwise mostly Euro backed vouchers as service backed vouchers. These vouchers are not directly convertible with each other.

The main distinction in backing is apparently based on the fact that regional money initiatives first of all have to persuade people and businesses to get involved and to accept the vouchers. Promoters can only work with the current understanding of money by most people as something with ‚a value in itself' so the question of backing of the currency has great priority.

1.1.3 Decision Matrix Unterguggenberger Institute Wörgl

The Unterguggenberger Institute in Wörgl, working in the tradition of the famous experiment with money and alternative currencies in the Austrian City of Wörgl (1932/1933 Ottacher, 2007), has developed a decision or properties matrix (both concepts will be used synonymously) for currency systems, which is meant to serve as a guide and decision aid. To this end, the columns are shown as main criteria, the rows are to be understood as ‚model characteristics'. To give an overview, only half of the column headings are reproduced here.

Currency systems properties matrix (Da Jerof, 2008)

- Creation
- Issuance / catchment area
- Performance
- User Groups
- Backing
- Function
- Standard of value
- Cost recovery
- System Type
- Medium
- Objectives

The matrix can be viewed (only in German) at the following link: <www.unterguggenberger.org/getfile.php?id=2043>

1.1.4 Typology of currencies after Kennedy / Lietaer

A specific and detailed typology of currencies can be found in the seminal book on regional currencies by Margrit Kennedy and Bernard A. Lietaer (2004). It attempts to establish a scheme for classifying all forms of currency:

"So, we will classify all forms of currency, whether conventional or complementary, historically attested or currently in development." Kennedy / Lietaer (2004), p. 237

The authors propose the following division into five different dimensions:

1. Purpose or objective
2. Medium
3. Function
4. Money creation process
5. Cost recovery mechanism

The purpose of this classification is to make it possible to make conceptually clear distinctions between the variety of current experiments with complementary currencies and to simplify the creation of new models. Two further subcategories with different attributes are proposed for the five dimensions. Corresponding attributes are introduced on a second level. Some attributes are given additional distinguishing criteria on a third level. The typology is comprehensive and can be seen in Table 1.

One disadvantage is quickly apparent: for many systems a whole bundle of attributes are assigned, or mixed criteria are given, which makes the differences even more complicated to recognise. For instance, 'Medium' is divided into 'commodity money', 'paper and coins', 'electronic money' and 'hybrid forms'. Many complementary currencies have to be put into the category of 'hybrid forms' and so the classification scheme yields no great insights.

This scheme is applied to several international examples in the book. Another pair of writers who use this typology are Karkuschke and Fischer (2006).

1.1.5 Classification of complementary currencies after Bode

In her degree thesis, "Potential of regional complementary currencies to promote endogenous regional development" for the University of Osnabrück, Siglinde Bode (2004) used her own, Kennedy / Lietaer-derived classification. It is based on the type of business relationship using the key: Business = B, Customer = C, relationship between them = 2 (to) and the resulting four possibilities:

B2B - B2C C2C - C2B (See Table 1 Kennedy / Lietaer, column, Finer Gradations).

From this she develops the following scheme:

CC-TYPE	RELATION-SHIP	PAYMENT SYSTEM	BACKING
LETS	mainly C2C	closed	service-backed
Barter Club	mainly B2B	closed	service-backed
Voucher System	mainly B2C (also B2B)	open	currency-backed

Table 2: Classification of CC Types according to Bode

This typology is based primarily on conventional business thinking. In the business economy, however, money is always assumed to be the medium of exchange. Thus, it is poorly suited as a base for a true typology. The division, however, has some practical value and provides important clues about how currencies operate.

1.1.6 Other typologies

On the occasion of 'Monetary Regionalisation / 4th Regional Money Congress' on 29 September 2006 in Weimar, Prof. Wolfgang Cezanne, then Professor of Economics / Macroeconomics at the University of Cottbus (now retired), presented a short 'typology' of regional currencies. Cezanne identifies three types of Regional Currency (Cezanne 2006):

- Demurrage money that remedies the low currency circulation rate due to excessive hoarding (wealth accumulation).
- Credit money that remedies the lack of demand due to lack of credit extension.
- Isolation money that remedies local competitive weakness with solidarity for the region.

This division very much assumes a 'repair function' of complementary currencies, which Cezanne in other respects finds unnecessary and attests to a correspondingly questionable, or even complete lack of, economic effect of all types of system. However, Cezanne is in favour of a 'denationalization' of money, in the sense of competition between different money systems.

The TALENT Switzerland association uses a classification of currencies by purpose and by sector (Dold 2010). Thus a spectrum between [market / competition] and [relationships, gift economy] is covered. The Swiss franc represents one extreme on the market side, time-based currency on the relationship side. In addition, 'sectoral money' that can be used for limited economic activities is distinguished. Examples given: Travel (Reka checks), education (educational vouchers Brazil), care in old age (Fureai-Kippu, Japan).

1.2 Discussion of current classifications

Current typologies are in many respects not satisfactory:

- The economic perspective limits itself to the functions of money or its material basis and reveals little about the money system itself.
- The distinctions of the Regional Money Association refer to the specific situation and problems of regional money and can not be extended to all complementary currencies.
- The decision matrix of the Unterguggenberger Institute undoubtedly demonstrates important differentiating features, but is intended as a guide for redesigning systems and is not designed to coherently allocate all existing systems.
- The classification by Cezanne is strongly emotional and judgmental and is not truly systematic.
- The Swiss TALENT classification actually builds on the stated purpose of the currencies, which is a connection worth pursuing further, but is not yet systematically applied.

The only typing discussed here that can claim to be fully usable is that of Kennedy / Lietaer. In fact, most cases can be clearly differentiated with it. Next to the term 'goals' in the main division, the term 'function' was introduced, which in neo- classical economics is divided into means of payment, measure of value, medium of exchange, store of value. These terms are, however, deployed to characterize money in and of itself. Any type of money can assume these properties. It is therefore not advisable to use them to distinguish between different currencies. (In addition to the above comments about this classification in and of itself). Otherwise there are many overlaps and duplications. A clear evaluation scheme and a description of the different types are missing. Thus this classification should be seen as an aid to characterizing and classifying various important features of currencies.

In this respect the previously considered typologies are not satisfactory and do not yet permit any easy comparisons. The following discussion attempts to develop an improved typology on the existing foundations with a focus on using it for evaluating the success of systems.

2. FOUNDATIONS OF A NEW TYPOLOGY

We will now try to avoid these drawbacks by first developing a basis for understanding money in a certain way. This will allow us to draw out various features and then, in the third step, show their relationships with each other. The goal is to enable the clearest possible differentiation of various currencies. By clustering similar attributes of different currencies we can then identify different types.

Since nearly all complementary currencies have emerged out of the particular idea of solution to social and economic problems, this point is included as a key criterion. We will also further develop the idea that a complementary currency also exists as an organization, which is kept alive through participation, membership, working together and mutual trust. Hardly any attention is paid to this aspect in today's 'national currencies'. Instead, it is often assumed that money carries society instead of the other way around. With complementary currencies this disguising effect falls away and it is usually quickly apparent that the behaviour of the participants determines the nature of the money used and that a specific organization is usually needed as 'carrier' of the currency. Hence it is a good idea to include the core ideals of a currency in its typology along with the rules by which one can become a member or may use the currency.

2.1 Categorization according to Greco / Riegel

As the basis and starting point for the development of the typology, a categorization of currencies mentioned by Thomas H. Greco will serve us (Greco 2009). A practice oriented categorization is to be found in the chapter How Complementary Currencies Succeed or Fail. Referring to ideas and principles of E.C. Riegel (2003), Greco first presents the following broad categories into which you can divide the factors that contribute to the success or failure of an exchange system:

- the architecture of the exchange system, or the currency in itself
- the management of the exchange system or currency
- the implementation strategies
- the context in which the currency or the exchange system is embedded.

Three key questions representing three (design) principles for building a successful currency serve in particular to explain the architecture in detail:

- Who is qualified to issue the currency?
- On what basis should the currency be issued?
- How much currency can be brought into circulation by each issuer?

In a later Chapter 18 Organizational Forms and Structures for Local Self-Determination and Complementary Exchange further points are listed. Also, several tips on successful implementation strategies are given and the importance of context is illustrated by two successful examples, the WIR Bank (Switzerland) and 'Social Money' (Argentina). An important point referred to is that both models arose in respective times of crisis. Point 2, the management of the currency, is not dealt with. Any further application or use of the categories is also not shown in the book.

Greco's foundation is used here to draft a typology as a model for mapping relationships in the architecture of a system.

2.2 Derivation of the basic dimensions

Thus the architecture of a currency can be characterized by the typology. Greco's three basic principles will serve as the starting point. This is followed by an additional fourth criterion articulating the basic purpose, which plays a decisive role in complementary currencies.

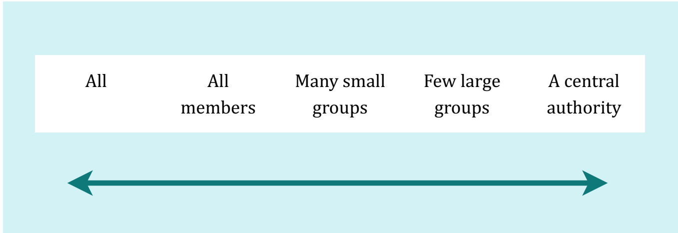
2.2.1 Principle 1: Who is qualified to issue the currency?

Answer according to Greco (2009, p.146): *Anyone who offers goods and services for sale in the market is qualified to issue currency.*

Or a further response according to Riegel (2003, p.16): *A would-be money issuer must, in exchange for the goods or services he buys from the market, place goods or services on the market. In this simple rule of equity lies the essence of money.*

This principle is in and of itself correct but needs to be expanded, because we cannot assume, in contrast to the two American authors, that ideal market conditions and completely voluntary agreements can be achieved. Thus we will modify the question to: Who is *entitled* to issue the currency? The answer to this question produces dimension A) of the typology: who has permission to issue the currency (Figure 1).

Figure 1: Permission to issue the currency



- All: all who wish to participate eg Japanese systems or Minuto.
- All members: Any participating member can create currency eg most time exchange systems.
- Many small 'groups' (businesses, organizations): eg only SME companies like in WIR.
- A few large 'groups': eg the commercial banks in most national currencies.
- Only one central authority: eg the responsible voluntary association as in most regional currency systems.

2.2.2 Principle 2: On what basis should the currency be issued?

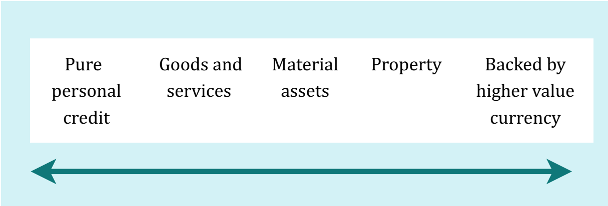
Greco responds to this question with a long-established principle of banking: Money should be issued on the basis of goods already in the market or on the way to the market. (Greco 2009)

That means that money is issued as bank credit on the basis of potentially available goods (and services). He makes a further distinction between turnover credit (credit facility, short-term credit) and investment credit (investment credit, long-term credit). The above banking principle only applies to a currency that is used for operating loans. Investment loans should not be guaranteed through money creation but only by already existing but currently unused money ('savings money').

Again, this principle is correct as far as it goes and should be followed, but needs expanding a little. Strictly speaking, the potentially available goods and services are not the reason for granting a loan but the current capabilities of a person or company to realize this potential. With each normal bank loan, banks try to assess the trustworthiness of potential borrowers using more or less suitable means. This assessment also has the final say in all figures and calculations, but is often only described as a 'good feeling' of the banker. So here we are dealing on the basis of 'trust in fellow citizens.' How does this then appear in the construction of a currency? A currency is created and does not live only through a single loan but from the sum of the mutual credit of all participants. The decisive factor is the quality of trust eg the strength of voluntary agreements and control of agreements on the one hand and, on the other hand, the willingness to trust others and actually give them credit.

We can distinguish between currencies with the following bases for currency issuance (Figure 2)

Figure 2: Basis for currency issuance



- Pure personal loan: credit is issued directly to people (companies) on the basis of their skills and track record. High form of trust.
- Credit against goods and services: credit is issued to people (companies) on the basis of their potential ability to produce goods and services.
- Credit against material assets: credit is issued to people and in particular companies on the basis of available capital (machines, buildings, rights, gold bars).
- Credit against property value: credit is issued to people and companies on the basis of property ownership.
- Credit against higher value currency: credit is issued to people and companies on the basis of a currency with a higher value eg most voucher systems, including regional currencies with so-called 'Euro backing'. Low form of trust.

2.2.3 Principle 3: How much currency can be brought into circulation by each issuer?

This question is the key issue in managing a currency. Riegel (2003, p.95) answered it like this: Each person or corporation is entitled to create as much money, by buying, as he or it is able to redeem by selling. So he sees it as an ideal that any person or firm should be able to issue as much money as they might be able to 'buy back' later with their own services.

The main challenge for a money system is the most 'accurate' possible balance of current supply and demand. Therefore, a stable system should serve to ensure that enough money is always available in the right place. Time plays a crucial role in this. A balance can only be determined for each accounting period, as today in the annual accounts of companies. Between these periods there is an indeterminate situation, when too much or too little money may be available. This leads to the seemingly trivial expanded statement, analogous to the fundamental law of accounting:

Any person or group in a monetary system is entitled to issue as much money in a certain period as they are able to receive back at the end of the same time period. (version by author)

Greco (2009, p.150) deduces from this the need to determine a specific credit limit for companies, based on previous regular returns. For example, if a vegetable cooperative had a regular annual turnover of $1 million, as a member of a monetary system it would now receive a credit limit (or ability to create money at any time) of $250,000, based on a period of 100 days (about 3 months).

As far as it goes, this principle of 'productive people and businesses' is certainly a good reference point.

The essence of the advanced formulation above then is the concept of the period. The crucial question here is clearly which period should be used? Here are a few ideas:

- Annual Sales: Should have covered all costs by the end of the year?
- New factory: Should have covered construction costs within ten years?
- Child: Should have covered the costs of training and education by the age of 40?
- Person of retirement age: Should have covered the cost of living to 85 by the age of 65?

Riegel's principle soon becomes relative in this context. It gets even more complicated in the case of disabled people, who can never repay the costs of their care during their whole life. In this respect, even the extended formulation can not be used as a base standard, although the principle is valid in many cases.

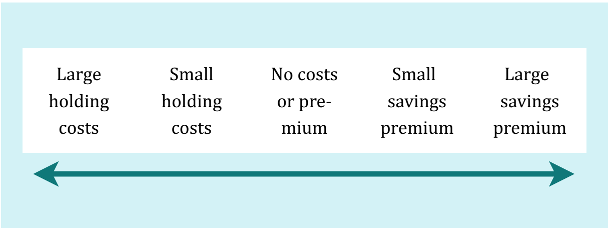
The question remains how the currency ensures that at the end of each period all accounts are in balance with each other. This is non-trivial for a currency, because if it is not guaranteed, then inflation or financial crises pose a threat. An actual total balance of all economic activities is, in most cases, not feasible. Exceptions are small systems and time banks with centralized accounting. But even here, truly relevant data about the life circumstances or phase of the participating users and organizations is often lacking. Thus, even a complete money balance has only limited significance.

What tools could still be used to assess this periodically necessary balancing of a currency? It would be possible, for example, to assess the circulation of the currency on the basis of the unused (idle) or lacking money. These components are substantially more static than the effectively circulating money but the determination of these quantities is often difficult with a currency. However, an even simpler quantity must be avoided. The question is the 'construction' of the circulation controls. The relevant question is this: *On what principle does the currency circulate?*

Decisive for this are the costs of the savings premium (also called liquidity premium, Keynes 2006, p.201ff). Interest-bearing money is often talked about in this context. The base rate of each Central Bank in the existing general currencies is a reference point. The ratios are however complicated even more by the ability of commercial banks to create money.

We can therefore distinguish between currencies with differential costs and benefiots for holding the currency (Figure 3):

Figure 3: Costs and benefits of holding currency



- Money holding costs mean that the currency automatically loses value over time (eg 'disappearing money' or time limited vouchers). This is also referred to as a 'circulation guarantee' as it encourages people to spend money as quickly as possible and not to hoard it. Control of the overall balance over time thus tends to be easier (negative feedback) as the necessity of regular new currency issuance makes it much easier to influence and correct existing currency substructures (assets, amassed property).

- No costs or premium: these are currencies that neither devalue themselves nor inflate through positive interest rates (eg time exchange systems). However, stagnation can easily set in through indifference and lack of trade.

- Savings premiums automatically cause a currency to expand and grow over time (eg all official currencies). This is an opportunity but is also an imperative to growth. People prefer then to 'invest' and hoard their money because they get an additional savings premium. Controlling the balance over time tends then to be more challenging (positive feedback) as the necessity of regular new currency issuance has an increasingly strong effect on existing currency substructures (assets, amassed property).

Critical to this approach is the fact that only the actual cash level is considered. Corrections, for example through taxes or other fees, should not be considered here.

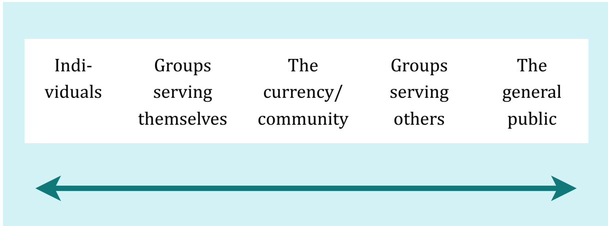
2.2.4 Principle 4: What are the aims of the currency?

As an additional fourth principle, we propose the consideration of the basic purpose or intention of a currency. This plays a crucial role in complementary currencies and is effectively the reason for starting them in most cases. Many complementary currencies have strongly altruistic features in their early days. In this sense they can easily be associated with the general idea of organizations in the non-profit sector.

This principle leads to the question: What purpose does the currency serve in the spectrum from individualism (egotism) to collectivism (altruism)?

This purpose should be principally derived from the mission statement of the issuing organization or, where this is not stated, from its proposed aims or current practice, as shown in Figure 4.

Figure 4: Who does the currency serve?



The currency serves in particular:

- Individuals: The currency should generate the highest possible wellbeing for individuals. Direct collective benefit is not intended eg historical currencies issued by local aristocrats.

- The currency serves the interests of groups themselves, eg most company discount systems.

- The currency serves a mixed currency community: The currency should serve all (potential) participants, eg WIR Cooperative, but also Lunch Checks (meal voucher system in Switzerland).

- The currency serves groups which strive to achieve positive effects for others, such as time banks for the socially disadvantaged.

- The currency is used throughout the community, difficult to realize as a goal, no current examples. There exist, however, suggestions for a 'world currency' or global reference currency, for example, Keynes's Bancor (Keynes, 1989) or Lietaer's Terra (Lietaer, 2002).

2.3 An evaluative overview

The next step is to further expand, summarise and create an overview of the individual categories described above. We will introduce a weighting system and logical order for the arguments. The results can then be represented in the form of simple diagrams.

2.3.1 Monetary purpose

What purpose does the currency serve? This is the most important of the foundations for a currency and serves as the main characteristic here.

Dimension: Serving individuals (self-oriented) <-> Serving everyone (others-oriented)

Rating: 1 to 5

1. Individuals
2. Groups for themselves
3. Currency Community
4. Groups for others
5. The general public

2.3.2 Basis of trust

On what basis should the currency be issued?

Dimension: low trust in people <-> high level of trust in people

Rating: 1 to 5

1. Credit based on higher value money
2. Credit based on property values
3. Credit based on material assets
4. Credit based on goods and services
5. Pure personal loan

2.3.3 Money creation cycle

Who is qualified to issue the currency? Or even better: how is the currency created?

Dimension: One issuing authority (central, easy to control) <-> Everyone (remote, difficult to control)

Rating: 1 to 5

1. Only a central authority
2. A few large groups
3. Many small groups / companies
4. All Members
5. Everyone

2.3.4 Circulation principle

On what principle does the currency circulate? The dimension ‘savings’ can be divided into five types of circumstance, arranged around the zero value.

Rating: +2 to -2

- +2 Savings premium large / unlimited
- +1 Savings premium low / limited
- 0 No savings costs or premiums
- -1 Savings costs low / limited
- -2 Savings costs high

2.3.5 Summary

Table 3 gives an overview of the proposed evaluation criteria.

2.4 Application to a typology

We propose here to represent two ‘dimensions’ in the form of a chart in order to develop our own typology from the above evaluation system. A unique ‘type’ may then be assigned through a division into quadrants (see Figure 5).

2.4.1 Basic currency concept

We summarize the first two values together in the basic currency concept:

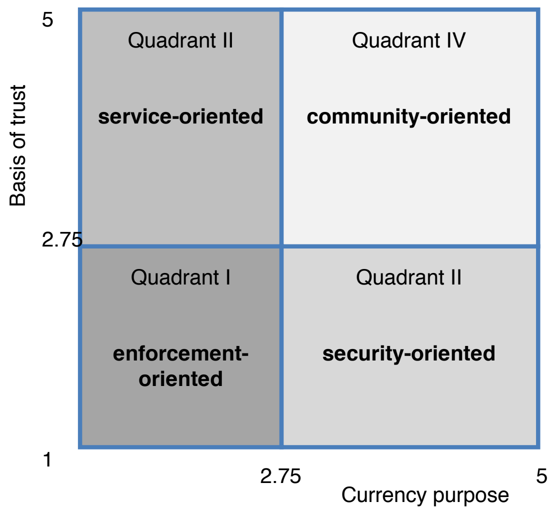
- Currency purpose
- Basis of trust

Table 3: Evaluation Grid

PRINCIPLE	NAME	RATING				
		1	2	3	4	5
P-0	Purpose	Individuals	Groups serving themselves	Currency community	Groups serving others	General public
		1	2	3	4	5
P-2	Trust	Higher valued money	Property	Material assets	Goods and services	Person
		1	2	3	4	5
P-1	Creation	Central agency	Few large groups	Many small groups/business	All members	Everyone
		-2	-1	0	1	2
P-3	Circulation	High savings costs	Low savings costs	Zero	Low savings premium	High savings premium

In order to make the assignment criteria for the quadrants clear, we will not use the mean value of 3, but the value of 2.75.

Figure 5: Basic Currency Concepts: diagram of the quadrants



The terms used:

- Enforcement-oriented: Money is seen as a means of enforcing (private/group) interests. The goal of unlimited personal enrichment is allowed.
- Service-oriented: Money is seen as a means for exchanging services. Personal relationships as an exchange of services.
- Security-oriented: Money is seen as a store of value, to be made secure, also through investments in property and assets.
- Community-oriented : Money is seen as an important community builder and means for personal development.

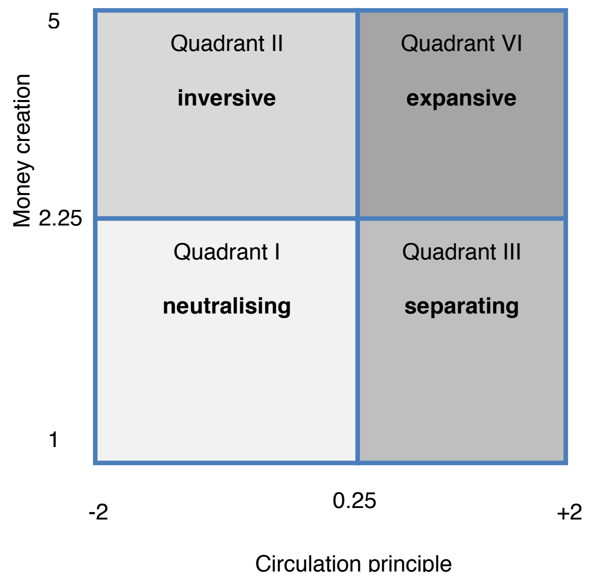
2.4.2 Technical design

We unite the second two values in the technical design:

- Money Creation
- Circulation principle

Here the quadrants are not assigned with the average values of 0 and 3 but are set at 0.25 and 2.25 in order to ensure clear classifications.

Figure 6: Technical design of the currencies: Diagram of the quadrants



The terms used:

- neutralizing : manageable systems with a tendency to offset inequalities
- inversive : more complex systems, good management necessary, the tendency to shrink must be actively dealt with
- separating: systems with strong growth that also create and promote inequalities, only limited control possible
- expansive : systems with a strong expansion drive, difficult to manage, regulation is done by regular collapse (today's stock market money-creation)

3. Examples of organizations and currencies

The typology developed above will now be applied to existing or former currencies. The selection of organizations running currencies was made with the purpose of encompassing a broad spectrum of different currencies. For this purpose we have referred back to organizations from the German-speaking countries we investigated for the Master's thesis. Of the 18 organizations studied, we selected those with the most differences from each other in order to use the typology in the widest possible way. In addition, we have included a concept by J.M Keynes for an international currency called the Bancor (Keynes, 1989). As a contrast, and also to portray the familiar national currencies in the typology as examples, the Swiss franc is introduced at the end using the same scheme.

3.1 Bancor (Int Clearing Union)

Organisation	A plan presented by John Maynard Keynes for an International Clearing Union at Bretton Woods in 1944 and unfortunately rejected by the politicians present. Members would be all states (or their central banks).
Currency	Bancor , Experimental tribute coinage
Members	none, intended as all the countries of the world
Turnover	-
Origin	see organization
Purpose	Purpose: The global balancing of surplus balances in favour of international planning, assistance and economic recovery. Idea stage / food for thought, still non-existent
Trust	Trust is based on the value of the individual member currencies.
Creation	By clearing and conversion of national currencies in the framework of individual credit limits for each state.
Circulation	A fee of 1% on balances up to a certain limit per country, 2% on balances above that limit.
Comments	No organization exists, therefore considered only within the typology.

3.2 Chiemgau Voluntary Association

Organisation	Chiemgau Voluntary Association, Rosenheim, Germany www.chiemgauer.eu
Currency	Chiemgauer, 1 Chiemgauer equals 1 €
Members	2,686
Turnover	4,019,513 Chiemgau / year
Origin	Founded in 2002, first issue of Chiemgauer 30.1.2003. Originated as a student project at the Free Waldorf school, Prien am Chiemsee.
Purpose	Construction of regional economic cycles, promoting the common good
Trust	Euro backed voucher system, € 100% deposited in bank accounts.
Creation	Chiemgau vouchers bought with €. Also electronic Chiemgauers in cooperation with regional banks. Also recently credit creation facilities in the context of the German micro-credit decree and backed by the German Microfinance Institute.
Circulation	Quarterly 2% fee. With additional redemption fee in €. Support for non-profit organizations. This can be directly specified by consumers / users and receives 3% of turnover.
Comments	Largest regional currency system and model for most other regional currencies in Germany. The organization has just been restructured. An additional organization, the Regios co-operative was also founded, primarily as an operating company supporting the electronic version of the Chiemgau and the specially developed billing system.

3.3 Coinstatt Cooperation Ring (Cooperative)

Organisation	Coinstatt Cooperation Ring (Cooperative), Witten, Germany . www.coinstatt.de
Currency	Coin , Value: 1 Coin equals 1 Euro
Members	67 participating businesses, no formal membership required, 247 users registered in November 2010
Turnover	200,000 Coin
Origin	Founded in 2010, existing previously as Coinstatt, Keusemann and Schneider Company
Purpose	"The Coinstatt Cooperation Ring exists to encourage and support exchange transactions between private and commercial users through the use of its own accounting unit as a complementary currency. This will contribute to sustainable, ecological and socially just economic forms, that have a particular concern for the worth of nature and people."
Trust	Is basically guaranteed by trust in the other Coin users. But the goods and services on offer play an important role for the users as a basis of trust.
Creation	Starter credit for all participants (individuals C 50 -, companies C 200, -)
Circulation	Expiry of notes after 6 months with possibility of 1:1 conversion, fee on overdrawn accounts, donations to charitable organizations.
Comments	Also working on the construction of 'Coin communities' eg in the area of health and on national networking and collaboration.

3.4 Minuto (Kirsch & Wettermann Foundation)

Organisation	Initiated and conceptualized by the Kirsch & Wettermann Foundation, Nentershausen-Bauhaus, Germany. www.minuto-zeitgutscheine.de
Currency	Minuto time vouchers. 60 Minutos correspond to one hour of quality service, conversion to € 30 € per hour.
Members	No real membership structure
Turnover	Not available
Origin	The idea of self-created payment medium and design by Konstantin Kirsch in February 2009, then implemented firstly in a local group.
Purpose	Solution to the dependence on global and centralized financial systems through decentralized, individual money creation.
Trust	Trust is based on the status of the issuing person and the personal support of one female and one male citizen.
Creation	Prepared, signed vouchers create money when first purchased (personal loan for the issuer).
Circulation	Coupons with limited validity. Return to the issuing person at the end of the circulation period (or before).
Comments	Experimental currency without central decision-makers. Already offshoots in other parts of Germany and Australia.

3.5 Swiss Lunch-Check Cooperative

Organisation	Swiss lunch check cooperative, Zurich, Switzerland. www.lunch-check.ch
Currency	Lunch-Checks, Vouchers in Swiss francs (Lunch-Franc)
Members	ca 4,000 members of the cooperative (restaurants and businesses) with 4,500 corresponding payment locations
Turnover	CHF 81.6 million
Origin	Co-operative founded in 1961 by restaurant owners (innkeepers) and people in gastronomic circles
Purpose	"The cooperative aims to operate a support system for private and public enterprises in the catering industry and to promote their interests" "... Was established with the aim of creating a kind of inter-company canteen. Since then employers have been offered a cost effective alternative to in-house catering solutions through a cashless catering system tailored to Swiss requirements. "
Trust	Sale of vouchers in exchange for Swiss francs. The francs are invested (carefully) in securities.
Creation	Each participating company has the right to create currency.
Circulation	Vouchers are valid indefinitely. Redemption only by members with 1.5% commission .

3.6 Swiss Travel Fund Reka Cooperative

Organisation	Swiss Travel Fund (Reka) Cooperative, Bern, Switzerland. www.reka.ch
Currency	Reka checks, Vouchers in Swiss francs (Reka-Franc)
Members	About 2.4 million users and 8,500 payment locations (number of cooperative members is not relevant)
Turnover	586 million CHF (Reka-Checks)
Origin	Cooperative founded in 1939 by employers' and workers' organizations and tourism associations following a treaty between the social partners. Initially issuing 'travel marks'.
Purpose	"As an organizer of social tourism Reka promotes holiday, travel and leisure activities, especially in Switzerland. It gives special consideration to the needs of people with limited financial means. Reka's core business in this context is the provision of a payment medium and of holiday offers."
Confidence	Sale of vouchers in exchange for Swiss francs. The francs are invested (carefully) in securities and real estate.
Creation	Purchase by employers' and workers' organizations, Coops or others. Resale at reduced prices to users.
Circulation	Vouchers are valid indefinitely. Initial 1.5% price reduction is further reduced by employers to 3-20%. Redemption for 3% Commission.

3.7 Talent Exchange Ring, Vorarlberg

Organisation	Talente Tauschkreis Vorarlberg, neighbourhood help association, Dornbirn, Austria, affiliated with its own management organization: Talent Services and Trade Registered Cooperative Society, Dornbirn. www.talentiert.at
Currency	Talents and hours, Value of 1 hour is equivalent to 100 talents = 7.8 € (or 115 talents is 10 €). Both vouchers (paper) and account management via a central, Internet-accessible system Cyclos
Members	Members 700, Participants / Users 1,800
Turnover	30,000 hours (2010)
Origin	Founded in 1995 as a result of various talent system initiatives, starting with the first system in Switzerland.
Purpose	"The purpose of the TALENT exchange circle is the utilization of idle capacity and regional resources in the context of a harmonious relationship between humans on the one hand and people and nature on the other."
Trust	Personal loans, each member has a ‘credit limit’ (-3 000 to 5,000 Talents for people, -5, 000 to 7,000 Talents for companies.
Creation	Both through effective exchange and purchasing transactions as well as buying Talents vouchers with Euros.
Circulation	Zero’ - without direct charges / benefits. Various levels of annual membership fee in Euros (0-50 €) and Talents (Talents 0-560) for material costs and account management.
Comments	Special accounts for pensions and health insurance exist, which enables people to save for retirement. Overall, one of the most advanced and sophisticated systems.

3.8 FleXibles Association

Organisation	FleXibles, Association for the investigation of a new economy-system, Zurich, Switzerland. www.flexibles.ch
Currency	Flecü (combines the association's name and the ECU, the old European unit of account before the Euro)
Members	80 members, of which 32 participants circulating currency during its existence (1992-94).
Turnover	Flecü 2,800 / year
Origin	Association founded in 1992 with its own funds to promote exchanges among members (then mostly self-employed or small companies). Pilot project Flecü no longer in operation, was completed after two years.
Purpose	During the life of the currency the purpose of the association was defined as follows: "The association's general purpose is to promote the creativity and development potential of professionally self-employed or partly self-employed people in their careers. The association wants to create a free space in the world of work, that enables the most diverse forms of self-employment and especially meaningful collaboration between different professions."
Trust	Acceptance value as its own reason for trust, person or also goods and services according to predisposition of receiver.
Creation	Basic right of all members along with issuance in exchange for services to the Community / Association.
Circulation	Interest-free, circulation controls through description of purpose and personal signature on delivery.
Comments	The association is still engaged today with complementary currencies but no longer issues its own.

3.9 Tauschen am Fluss Association

Organisation	Tauschen am Fluss Association, Zurich, Switzerland. www.tauschenamfluss.ch
Currency	Hours (Fluss-hours). Account management via a central, Internet-accessible system Cyclos
Members	186
Turnover	935.5 hours (2010)
Origin	Founded in 2006 with strong backing from the ‘Pro Juventute, Zurich community centres’, that in turn has a contract for socio-cultural services with the city of Zurich.
Purpose	"The purpose of the association is the exchange of services. In addition to the practical benefits and mutual support amongst members, this should encourage and maintain personal relationships between participants."
Trust	Personal loans, each member has a ‘credit limit’ (+ / - 20 hours)
Creation	Through effective exchange and settlement mechanisms (mostly personal services).
Circulation	Zero’ - without direct charges / benefits. Annual membership fee of CHF 40 - plus 2 hours of work for the Community exchange.
Comments	Is integrated into the Zurich Community Centre Wipkingen and can also draw on resources there (labour, facilities).

3.10 WIR Cooperative Bank

Organisation	WIR Bank, Basel, Switzerland www.wir.ch
Currency	WIR-Franc (CHW)
Members	56,500 members (companies)
Turnover	CHW 1.6 billion (WIR francs) per year
Origin	Founded in 1934 by seven companies which were denied access to credit by the banks. Federal banking license.
Purpose	"Self-help organization for commercial, industrial and service enterprises (SMEs only). Through the WIR system the organization brings economic benefits to its members and other WIR users and manages one of the few banks remaining open to the general public. For this purpose the WIR bank runs the following activities: organization of the WIR clearing system as well as the WIR mortgage and loan business; management of the banking business, such as receipt of foreign funds in all bankable forms, mortgage and lending business and external business, particularly management of payments."
Trust	Credit rating of members on joining, only commercial businesses with an appropriate track record.
Creation	Via credit creation against normal bank guarantees or also through business-related loans by the bank.
Circulation	In itself interest-free, interest on loans actually covers costs without an expansion of the money supply.
Comments	World's largest complementary currency.

3.11 Swiss Franc (Swiss National Bank)

Organisation	Swiss National Bank Corporation, Zurich and Bern, Switzerland www.snb.ch
Currency	Swiss-Franc CHF
Members	No Non Profit Organisations.
Turnover	Effective turnover could probably be estimated from the Swiss gross national product.
Origin	Based on laws, decrees and decisions of the Swiss Federal State since 1848. Incorporation of the business 1907.
Purpose	International currency, which however is still based on the same concept as a national currency (derived from the nationalism of the 19th century) and which can be attributed to the needs of individual aristocrats and bankers.
Trust	Effectively in the power of the state or territory and thus in its natural assets / property.
Creation	Intransparent system with parallel creation of money by private commercial banks. Also today massive creation of money through direct speculation by other participants (derivatives, hedge funds, etc.). Thus 'bets' on rate changes are traded as securities.
Circulation	Positive base rate when issued by the Central Bank. Plus, at the level of commercial banks, additional interest rate rises depending on the effects of speculation.

4. EVALUATED EXAMPLES

Based on the 10 previously presented complementary currencies and the Swiss franc as a comparison currency, the typology can now be clarified. As with any typology, here too questions of clarity arise – several classifications would be possible. Each of these questions is answered here with 'more the case that' or 'the main point is that / with an emphasis on'.

The examples are evaluated in the following table. In this case the grid is extended to include intermediate values (0.5). Currencies which could not be clearly assigned or for instance currencies which started with one score but have now developed towards the next point, have been valued with half points. The evaluations in the previously published article Martignoni, 2010) have been partially corrected. The score (-2) for circulation was never assigned, instead (-1.5). Swiss francs (or Euros) have been reclassified as 'expansive'. The figures originate as far as possible from the descriptions of the currencies in section 3. The figures for circulation were estimated when not clearly known. For a detailed calculation of the actual savings costs and premiums more data needs to be collected.

Table 4: Evaluation of the examples

CURRENCY	PURPOSE	TRUST	CREATION	CIRCULATION
Bancor	4.5	1	2	-1
Chiemgauer	3.5	1.5	1	-1.5
Coin	3	4.5	3	-0.5
Flecü	2.5	4.5	1	0
Fluss-hours	2	5	4	-0.5
Lunch-Franc	2	1	1	0.5
Minuto	1	5	5	0
Reka-Franc	4	1	1	1.5
Talent	3	3.5	3.5	0
WIR-Franc	2	3.5	3.5	0
Swiss-Franc	1	2	3	2

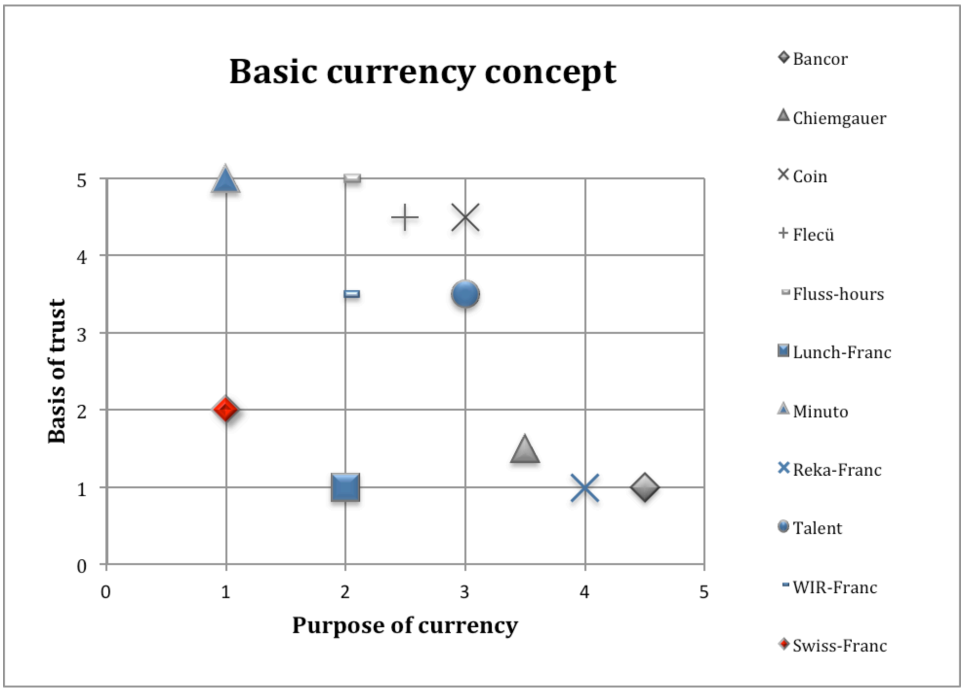


Figure 7: Diagram of basic currency concept with examples included

4.1 Results

The assessment presented within two diagrams is shown in Figures 7 and 8. Figure 7 shows the basic concept of a currency to be distributed in all four quadrants. In Quadrant II, service-oriented (top left), there is a cluster of time exchange systems in particular, while in quadrant III, security-oriented (bottom right), we find those currencies based on national currency.

The technical design (Figure 8) shows a distribution centred in the quadrant I and II, that is neutralizing and inversive. Presumably this can also be traced back to the prevailing criticism of interest payments (eg from the Free Economy teachings of Gesell) in the complementary currency community. Here positive interest rates are seen as jointly responsible for the instability of the monetary system, since exponential growth can be ascribed to it. The example of the Reka-Franc, however, shows that this effect can be successfully harnessed to meet social needs.

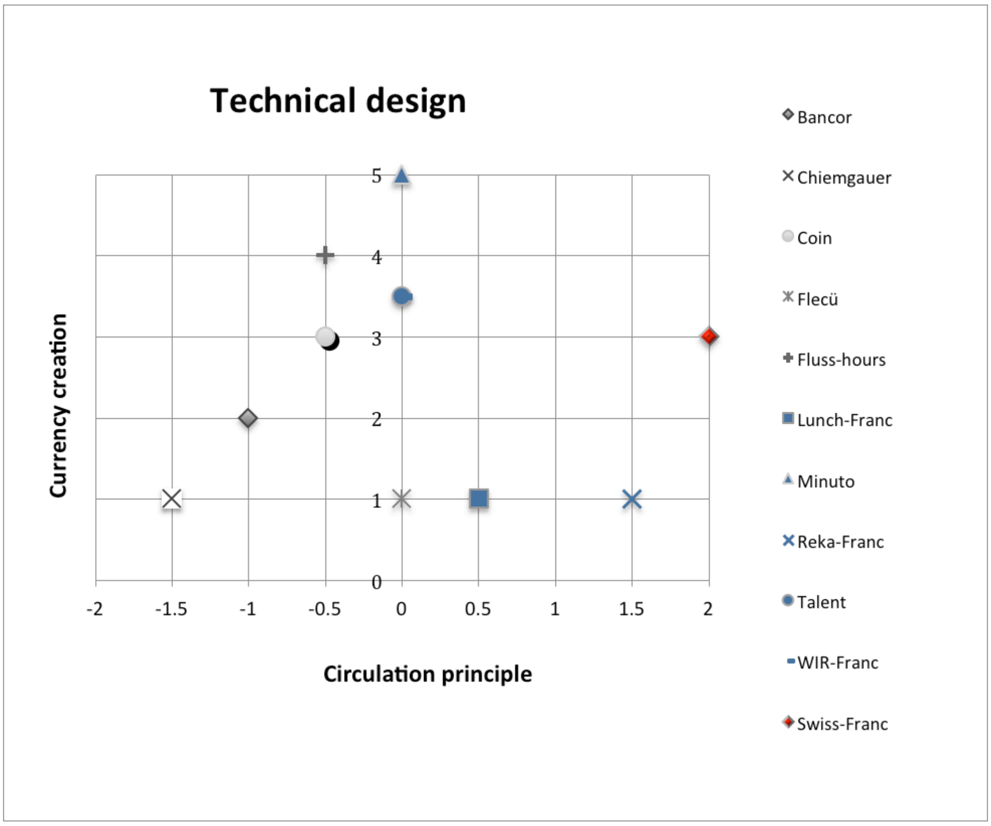


Figure 8: Diagram of technical design with examples included

Table 5: Overview of Completed Typing

CURRENCY	BASIC CONCEPT	TECHNICAL DESIGN
Bancor	security-oriented	neutralizing
Chiemgauer	security-oriented	neutralizing
Coin	community-oriented	inversive
Flecü	service-oriented	neutralizing
Fluss-hours	service -oriented	inversive
Lunch-Franc	enforcement-oriented	separating
Minuto	service -oriented	inversive
Reka-Franc	security-oriented	separating
Talent	community-oriented	inversive
WIR-Franc	service -oriented	inversive
Swiss-Franc	enforcement-oriented	expansive

4.2 Discussion of results

It is found in this analysis that, from the sixteen theoretically possible combinations of the chosen sample currencies, seven emerge, as shown in Table 6.

Table 6: Overview of The Types Found

TYPE	BASIC CONCEPT	TECHNICAL DESIGN	NUMBER
A	enforcement-oriented	neutralizing	
B		inversive	
C		expansive	1
D		separating	1
E	service-oriented	neutralizing	1
F		inversive	3
G		expansive	
H		separating	
I	community-oriented	neutralizing	
J		inversive	2
K		expansive	
L		separating	
M	security-oriented	neutralizing	2
N		inversive	
O		expansive	
P		separating	1
	TOTAL		11

This could now be followed by a detailed analysis of the results but the limited scope of this work does not permit it. The examples are intended primarily to demonstrate that the developed typology is useful as a working tool.

4.3 Findings and further questions

After running through this classification process we may once again ask whether anything has been gained by it. Does it open any new perspectives?

The author believes the new typology presented here achieves this because it is based on a conceptually more consistent basis than previous classifications. This represents a move away from classical economics, which does not recognize money and currency as independent economic objects. Thus, it is a contribution to the on going discussion about a new view of currencies and money, even within the economic sciences. With the help of the grid when designing a new currency it will be easier to decide which basis should be chosen. The typology might also play a role as a variant of a systematically derived morphological framework (Zwicky, 1989).

How useful and applicable these proposals are for working practice, for people who want to establish, manage or use complementary currencies, remains to be seen. The terms and definitions will be adjusted and checked against other examples in future.

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