

Summary of the Final COMPARE symposium in Zurich, Switzerland

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Introduction

The COMPARE project aimed to pursue a very ambitious objective, to build an understanding of the concept of self-organization, with a rather modest approach, the exploration of different case studies of self-organization in real-life by small groups of researchers, practitioners, and activists with different backgrounds and perspectives.

In the first COMPARE meeting in **Cagliari, Sardinia**, seven people with different profiles (engineering, urban planning, interdisciplinarity, geography, entrepreneurship, political philosophy, sociology, and architecture) gathered to describe what self-organization means from their own perspective and study all together a concrete success story: the Sardex.net mutual credit system in Sardinia (see COMPARE network, 2014a).

In our second meeting in **Thessaloniki, Greece** we studied various self-organization movements on social solidarity and urban cooperatives that appeared after the crisis in Greece and expanded our network to include an urban activist from Belgrade, a financial activist from London, and researchers and activists in Greece, in total thirteen people. After numerous guided visits to different initiatives in the city of Thessaloniki, a one-day symposium took place where all participants shared their experiences with self-organization, and discussed the conditions under which successful case studies from abroad could be transferred to Greece (see COMPARE network, 2014b).

The final COMPARE symposium on self-organization took place in **Zurich, Switzerland** and managed to gather more than thirty people, including engineers, economists, urban planners, geographers, sociologists, environmentalists, architects, and practitioners in the areas of complementary currencies and cooperative housing. The symposium lasted for three full days and included scientific panels, keynote talks, guided visits, and a semi-public event, the COMPARE assembly, that took place in different locations in the city attracting additional external guests. More specifically, we explored three main practices of self-organization:

1. Engineering, building on the significant expertise of ETH Zurich in the areas of networking and automation.
2. Complementary currencies, building on the big success of Sardex.net whose presence in Zurich attracted many important local initiatives, like the WIR and the BonNetzBon Basel, and prominent researchers and activists in this area.
3. Urban cooperatives and self-managed spaces, which have a long tradition in Switzerland and especially in Zurich, building on the key participation of INURA members in this movement who organized in depth guided visits to two of the most interesting case studies, the Kraftwerk1 and Kalkbreite cooperatives.

In addition to the very lively discussions during the event and the positive feedback received on the organization and the diverse mix of participants and case studies presented, the COMPARE symposium in Zurich has established an open network of people interested in the topic of self-organization. This network has already started to grow outside the context of the COMPARE project, and there are many ideas on how to proceed along these lines: the collaborative editing of an e-book on the various case studies on self-organization explored during the project; the organization of side events and workshops in conferences that many people from our network will participate in (like the INURA conference or related festivals like the upcoming CommonsFest in Athens); and more.

In this document, produced only a few days after the symposium, we provide a short overview of the various activities and discussions as they evolved over time. We conclude with a first draft of an overarching framework, a set of questions, which aims to capture the most important elements identified during our interdisciplinary explorations of self-organization, in order to support meaningful comparisons between different approaches developed in different environments and by different types of actors.

Given the high-level of diversity introduced in the context of COMPARE, this comparison cannot be but a long process for which we believe that we made a first step. The engagement of numerous people outside the project and the desire to keep in contact and continue our collaboration in different contexts give us a lot of hope that we will be able to perform more steps in the future toward understanding better the secrets of successful self-organization projects and how ICTs can both help their objectives but also learn from them.

Day 1: Engineering, the city of Zurich and the Kraftwerk1 cooperative project

The symposium started at ETH Zurich where participants were introduced to the COMPARE project by Panayotis Antoniadis and Ileana Apostol and were given a short overview of the previous meetings and cases studied in the context of the project.

Then a panel on the engineering was led by **Prof. Bernhard Plattner** who gave an overview of self-organized systems in the Internet, such as the inter-domain routing ecosystem, peer-to-peer networks, and the web, mentioning the tendency toward “centralization” as expressed through the increasing adoption of Software Defined Networking solutions. As he stressed “self-organization needs reasonable and accepted policies, else it will not work”, which is a fact that we have repeatedly identified during the COMPARE project.

Prof. Plattner gave also an overview of recent research projects carried out at the Communications System Group that have addressed the concept of self-organization from different perspectives. More specifically, he presented key concepts developed in the following projects:

- the ANA project, which aimed at exploring novel ways of organizing and using networks beyond legacy Internet technology, and which designed and developed a novel autonomic network architecture that enables flexible, dynamic, and fully autonomous formation of network nodes as well as whole networks.
- the ResumeNet project, which investigated a framework for network resilience consisting of a number of components, including approaches to evaluate network resilience based on metrics, and architectures that can be used to detect challenges and mitigate them in real-time.
- the Swarmix project, which laid the foundations for the design, implementation, and adaptive control of heterogeneous multi-agent systems that are composed of humans, animals, and robots, working in cooperation to solve distributed tasks that require a wide diversity of sensory-motor and cognitive skills, as demonstrated by an impressive video produced to demonstrate the effectiveness of the technology produced, available at: <https://www.youtube.com/watch?v=ASy4X43bRLc>

In the same context, **Markus Happe**, senior researcher and lecturer in the same group, presented the EPiCS project a trans-national multi-disciplinary research collaboration which aims at laying the foundation for engineering the novel class of proprioceptive computing systems. Proprioceptive computing systems collect and maintain information about their state and progress, which enables self-awareness by reasoning about their own behaviour, and self-expression by effectively and autonomously adapting their behaviour to changing conditions. The question of whether machines can truly become self-aware raised an interesting debate about the ethical issues that arise from such a development.



Figure 1: a) A Kinect-controlled flying quadcopter in ETH's flying arena that is trained to return the ball thrown toward it back to its source (left) b) Iva Cukic wearing the protection glasses that were given to us during the demonstration

This discussion was the perfect introduction for the following demonstration at the ETH Flying arena by **Maximilian Kriegleder** and his colleagues from ETH's Institute for Dynamic Systems and Control, who gave us two short but impressive demos of the Kinect-controlled flying quadcopters and the Distributed Flight Array¹. The discussion that followed touched on issues like the focus of engineers on the technological challenges of such systems without always considering the possible applications, and the close relation between information management and self-

1 See a related TED talk by the leader of the group Raffaello D'Andrea: <https://www.youtube.com/watch?v=w2itwFJCgFQ> and one by Maximilian Kriegleder on the Distributed Flight Array: <https://www.youtube.com/watch?v=OmTTNCaAUmU>

organization in the engineering context. Indeed the key difference between the two types of UAVs demonstrated is that in the case of the flying quadcopters synchronization is achieved through a central controller which collects in real-time all necessary information by the quadcopters and calculates the exact positions that they have to move in order to accomplish their task. On the other hand, the Distributed Flight Array depends only on locally exchanged information between the robots, whose actions however are still dictated by the implemented algorithms and, from this point of view, they are not more “self-organized” than the Kinect-controlled flying quadcopters.

The existence of more or less hidden points of control and centralization in the self-organized systems that current engineering technology is able to construct today is an important lesson learned in the COMPARE project.

After lunch at ETH's Dozentenfoyer, Philipp Klaus guided the symposium participants through the history, architecture, urban development and urban struggles in the city of Zurich toward our next stop, the Kraftwerk1 project. A highlight of the walk through the centre was a brief stop at the Cabaret Voltaire, where the Dadaism art movement was born.



Figure 2: a) Philipp Klaus providing an introduction to the guided tour from the terrace of ETH's Dozentenfoyer overlooking the city of Zurich, b) Philipp Klaus together with the group of COMPARE participants that followed him through the guided tour of Zurich, close to the Cabaret Voltaire

Kraftwerk1 is a cooperative and grassroots housing and workspace project with three settlements located in and around Zurich. It started as an experiment in the real estate crisis of the 1990s, departing from the vision of a worldwide movement of appropriation of former industrial areas, toward shaping “a new civilisation beyond work.” Kraftwerk1 became a collective, self-organized, environmentally and economically sustainable urban alternative, within a mix of residential, social and commercial spaces. The first development was completed in 2001 and is housing around 270 people in 81 residential units (suites) of various compositions and sizes, from individual housing to collective living (2 to 13 room suites), which are self-financing and define their own social structure. Additionally, more than 100 people work in small businesses of all kinds in the building complex. A restaurant (14 gault millau points), a hair-salon, a self-managed shop and a kindergarten are some public services provided in Kraftwerk1. As Kraftwerk1 was not supposed to become an island disconnected from its larger context, there are multiple ways in place to connect it with the city, the outside economy, and the countryside (e.g., through exchange of agricultural or industrial products). Its members maintain a direct link with farmers in the proximity of Zurich, through food supply and temporary commitment on the farms. For visitors, there is guest room provision, and the commercial and office spaces on the premises establish further networks.

Through the process of development and (daily) living, Kraftwerk1 contributes to the renaissance of the traditional cooperative movement in Zurich. Its members developed environmental standards, operational concepts, and collaborative activities in dialogue among themselves and the elected cooperative bodies. The Kraftwerk1 cooperative expanded in 2012 with a second settlement providing space for 85 inhabitants, including flats for disabled people. In 2015 another settlement will be inaugurated in the proximity of the Zurich Airport for 240 people living and 90 working. More cooperatives in Zurich based on similar ideas are: Mehr-als-wohnen, Kalkbreite, Wogeno, NENA1, and more.



Figure 3. a) Giuseppe Littera reading the energy consumption information board in Kraftwerk1 and b) The Kraftwerk1 building.

The INURA Zurich Institute's office rooms have been situated in Kraftwerk1 since the very beginning and Philipp Klaus lives also there. So, he was perfect to provide a guided visit to the participants and additional guests who joined for this part of the symposium, followed by a home-made buffet dinner at the cooperative's Dachraum, used in common by all inhabitants.

Finally, **Andreas Wirz** gave a keynote talk on the history of the cooperative movement in Zurich, today around 20% of flats in Zurich belong to cooperative housing projects, and answered many questions on the legal, political, cultural, and social dimensions of this very interesting case study on self-organization. The main lesson learned is that there are many benefits, both economic and social, from sharing the ownership of housing (e.g., low rents, feelings of solidarity and support), but also through the efficient shared use of common spaces (e.g., living rooms, guest rooms, kitchen) and facilities (from washing machines and dryers to expensive but rarely used objects), and the principles of self-help and self-management. Such sharing and sustainable lifestyle is re-inforced by specialized architectural design, especially in “young” cooperatives such as Kraftwerk1 and Kalkbreite, but also through various rules such as, the no or very limited use of cars, the redistribution of flats after big demographic changes (the birth of kids, separations, etc.).



Figure 4. a) Philipp Klaus introducing Andreas Wirz before giving his keynote talk on “cooperative housing in Zurich” at Kraftwerk1's Dachraum (meaning “the room at the roof”) b) The Dachraum's terrace.

Then the natural question that arose was under which conditions this cooperative housing model could be transferred to other countries like Greece or Italy and why there are not notable examples in such countries despite the obvious benefits. There seemed to be consensus that although there are special economic and political conditions that facilitate the adoption of this model in Switzerland, it is mostly the cultural differences that make the appropriation of the model difficult. For example, in Greece there is a culture of “owning” instead of “renting” houses and perhaps it is not a coincidence that in the Italian part of Switzerland the cooperative model is not so popular as in the German part.

Day 2: Full day workshop on complementary currencies

This was an intellectually intense day of the symposium, which was dedicated to the case of complementary currencies. In the room there were many key people in this area, from those with hands-on experience in building real-life projects to prominent theorists, researchers and activists.

The first panel titled “success stories” brought together Claudio Gisler, member of the senior management of the WIR Bank, Giuseppe Littera whose visit to the headquarters of WIR in Basel 7 years ago was the first step toward the creation of Sardex, Isidor Wellman, the leader of another Swiss success story, the BonNetzBon currency in Basel, and Goran Jeras, a young entrepreneur who has built the e-Banca in Croatia.

Claudio Gisler is one of the persons responsible for the design of the new generation of the well-known WIR currency, perhaps the most long-lived and the most successful complementary currency projects today. His master thesis was on the “motives for participating in the WIR-System”. So he was the right person to present the history and current situation of the WIR and the plans for its refurbishment given the slight decline of the levels of participation the last years. The main reasons for this tendency is the perception of WIR by people as too complicated, old-fashioned, and too much dependent on the overall economy, while the existence of “invisible” WIR participants is also an obstacle for its widespread adoption. The existence of over 50% invisible members (SMEs that do not want to advertise the fact that they belong to the networks, and that they accept WIR for their products, but wouldn't want to lose customers that give a priority to the ability to pay with WIR) is perhaps an effect of the very high percentage of WIR members that join the network for their own interest. More specifically, according to Claudio's study the two top, by far, reasons for entering WIR according to its members were “getting new customers” and “increased turnover”.

So, according to Claudio in order for WIR to gain more acceptance it needs to be easier to understand, only have one kind of membership (visible members only), increase the solidarity among the members, and include various services that will facilitate its everyday use (e.g., smartphone apps, search engines, online community, advertising, WIR and CHF combined debit card, cash withdrawal at any ATM in Switzerland (and Europe), and more. It was great to have as our next speaker Giuseppe Littera, who contributed in the creation of a similar mutual credit system in Sardinia, which although it has not yet reached the levels of membership and turnover of WIR, it does grow rapidly.

Giuseppe Littera presented briefly how Sardex.net appropriated the WIR model to create a different system and focused on the difficulties faced today by his company trying to replicate their successful model to other areas in Italy (see also COMPARE network, 2014a; Littera et al. 2014, Dini and Kioupkiolis, 2014). Giuseppe stressed the need for personal investment and efforts by the leaders of a mutual credit system like Sardex, and very eloquently described how interested people from other regions of Italy are advised to follow the “stone diet” for at least three years before the first signs of growth appear. But as he mentioned many people are not so patient and they often get disappointed after one or so years. In that sense, Sardex's success was not only due to the appropriation of a successful model (WIR), but most importantly it was due to the dedication and continuous efforts by its founders.

Prof. Isidor Wallimann presented the social and solidarity economy (SSE) for dealing with some contemporary problems known both in industrial and developing countries. As he explained, SSE should be conceived as a ‘grass roots’-based, regionally oriented federation of democratically run ‘local’ enterprises, whereby networks between federations may be created to cover larger territories. Organized in various legal forms as co-operatives, associations, foundations, or corporations, the important criterion is that all should be organized for members to have control over capital and surplus value. SSE represents a unique economic culture in which firms and social and ecological needs are dependent on each other. To recognize this very interdependence, however, allows for society on a local and regional level to develop resilience against the odds of markets and free-flowing capital. Conceived thus, SSE can also serve as a platform from and with which to move towards qualitative growth and sustainability. An example of such an effort is the Social Economy Basel. It saw its beginning with the Social Economy Association (SEA) founded in 1996. With its membership and a ‘one member, one vote’ system the association strives to build a prototype of SSE. The idea is similar to that of ‘biotopes’ which represent attempts to preserve biodiversity amidst and against the odds of industrial society and agriculture damaging biodiversity. The SEA Basel mission is to contribute to social, local, and ecological sustainability on a local and regional level. Its growth is kept at an ‘organic’ level so as not to depend on top-down outside funding. Human resources and funding needed for administrative tasks and growth emanate in grass root fashion bottom-up from ‘the movements’.

The next operative step occurred in 1998 when SEA founded the Social Economy Network Co-operative starting with already existing worker self-managed firms and civil society movement organizations. Membership is open only for organizations. Each network co-op member has one vote irrespective of its size. Organizations with various legal forms are accepted as long as statutes guarantee the ‘one member, one vote’ principle, and that members may decide over employment practices and the use of surpluses. For-profit or not-for-profit organizations may be federation co-op members. As a result, the network co-operative is composed of a combination of commercial and civil societies.

In 2002 the Swiss Franc-backed alternative currency BNB (GoodNetworkVoucher) was launched. In a pilot phase it was first tried only among members of the Social Economy Network Co-operative. Subsequently, it went public in 2005 to include individuals, businesses, and NGOs outside the co-op network. Some 120 firms and non-profit organizations presently accept the BNB. In so doing they receive free publicity. Participation is free of cost. The BNB is valid for 3 years, when bills in circulation can be exchanged free of charge for the new series. There is no penalty when BNBs do not circulate within a given time. All circulation is based on ideational movement energy and co-operation. Due to co-operation with the neighbouring social economy in Mulhouse (France), the BNB can be exchanged against the French SOL – and vice versa – being used in the Alsace social economy network. One goal is to make self-produced energy units backing the BNB and to move away from Swiss Francs as the currency backing the BNB. Another goal is to combine the BNB hours exchange system with the Swiss Franc-backed BNB. This would allow for a very low-level entry path into the Social Economy Basel exchange system (see also Wallimann, 2014).

Goran Jeras presented the motivation, design features and current status of a new cooperative ethical bank in Croatia, <http://www.ebanka.eu/>. E-banka was created by a core-team of 15 people from different disciplines and backgrounds (mathematics, physics, computing, law, economy, social sciences and some bankers) and counts today over 400 cooperative members including individuals, SME's, Co-ops, municipalities, NGOs, and unions. As most ethical banks it follows the principles of transparency, sustainability, solidarity, democracy, and openness. Unlike traditional banks, it tries to save resources and become profitable by completely avoiding the use of cash, relying on the facilities of its members for its physical presence (no dedicated bank buildings), and sharing the risk and benefits between its members.

E-banka invests also on the underlying software platform, which is open source, it provides a flexible assembly of financial contracts and a tailor-made approach to customers with integrated KPI monitoring and risk assessment tools, among others, and which minimizes the banking and transaction costs. The E-banka includes additional integrated functionalities for supporting crowdfunding, p2p lending, alternative currencies, even barter economies which could lead to win-win situations for the customer and the bank. For example, crowdfunding options provide for customers flexibility to propose projects for funding and opportunities to invest in projects they believe in and, for the bank, better insight in community needs, access to the interesting projects and business opportunities, and the reduction of investment risks. Similarly, alternative or complementary currencies provide more tools to support the local economy, facilitate a higher frequency of money turnover, and increase in social capital. At the same time, this means for the bank an additional service to the customers, effective mapping of local interactions, better knowledge of local communities, and reduced risk due to “hedging”.

The second panel was on different theoretical perspectives by Paolo Dini, Laura Sartori, and Luca Fantacci, economic historian and co-author of the book “The end of finance” (Amato and Fantacci, 2012).

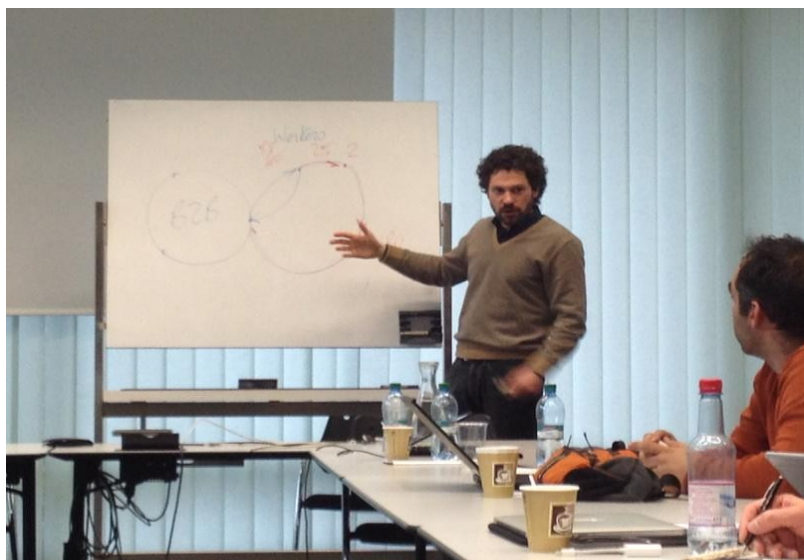


Figure 5. Prof. Luca Fantacci explaining his special demurrage mechanism for complementary currencies

Paolo Dini built on previous work carried out during the COMPARE project (see Dini and Kioupiolis, 2014, and Littera et al., 2014) and presented a new case study under development in Puglia, Italy, in which there is an effort to introduce open knowledge as an integral part of the local economy supported by a mutual credit system like Sardex. His talk was structured as a brief interdisciplinary retrospective on his last 12 years at LSE, when he began making the transition from engineering to social science.

When he joined LSE in 2003 he was confronted with the puzzle of open source in the context of sustainable development, a common thread in his study of social science over the past 12 years. Public goods theory, Ostrom's work, Benkler, etc were fascinating but failed to link the undeniable importance of social value to the economic bottom line. The business literature (Anderson, Tapscott) were better at explaining the changing paradigm. In 2005 he met Michael Linton, the inventor of the LETS community currency (CC), and felt that his knowledge of monetary theory was woefully inadequate to understand this remarkable phenomenon.

In 2011 he ran across Stephen Gudeman's work on the anthropology of economy, where the economy is divided into four domains of value: market, capital, social relationships, and commons. In this view for the first time the 'social' and the 'economic' spheres were not seen as incommensurate: social relationships are a part of economy, they are not outside it. However, crucially, what we learn from "pre-modern" cultures is that this does not have to imply a commodification of social ties as we see today with e.g. the marketing of online social network analytics but, rather, the opposite: the "colonisation" of economic value by social value. He postulated that CCs might provide a 'mechanism' or, better, an institution capable of quantifying social value, leading to the realisation that CCs, and in particular B2B electronic mutual credit systems like the Swiss WIR or the Sardinian Sardex, appear to be fundamental to sustainable development.

Whereas the capitalist financial economy has shown to be inadequate at the global scale and in dire need of a rethink, the capitalist 'real' economy and entrepreneurship at the national scale are formidable forces for growth and the raising of living standards. However, for SMEs and microenterprises acting at the local scale the effects of credit and liquidity fluctuations, the power of commercial banks arising from their ability to create money as interest-bearing loans through the fractional reserve system, and the commodity nature of money can be deleterious. Thus, development policy would benefit from accepting the wisdom of an 'ecology of economic systems' (Douthwaite 1999), each with different characteristics and each with well-defined scopes of action and influence.

It is not new to say that innovation is more about governance than new technology. But it was surprising to see that Sardex appears to reinforce local democratic institutions, trust levels, the legitimacy of the national currency, and the local economy, all at the same time. The work of Geoffrey Ingham on the sociological nature of money and of Mary Mellor on the future of money as a public resource (also: Amato and Fantacci 2012a,b; Zelizer 1994) finally provided the missing link in the theory: money is a *social* relation, in the sense that all money is ultimately (assignable) debt (or credit, depending on the viewpoint). It is then not surprising that money creation and power aggregation are intimately connected. What is surprising is to discover that it is not difficult to take this monopoly away from the banks through interest-free mutual credit systems such as Sardex.

Import substitution, which carries a negative non-competition connotation in mainstream economics, in CCs brings an average increment of 10% in turnover to participating companies in disenfranchised communities with negative trade balances and, at the same time, strengthens the social relations within the circuit. It is therefore easier for Sardex members to agree to total tax transparency, by contract. Apart from a net increase in tax revenue (paid in the national currency), this provision carries a deeper significance. According to Knapp's state theory of money, money is that which the state exacts as tax. Money, therefore, requires an authority for its legitimisation. Thus, Sardex and WIR are truly complementary currencies that protect the local economy from global credit fluctuations caused by liquidity crises but that, in addition, also reinforce the legitimacy of the state and of the national currency. This would seem to help rebuild trust between the state and the citizens – something particularly important in countries like Italy.

With this backdrop, Paolo spoke briefly of his recent visit to a knowledge innovation start-up based in Lecce, Puglia (beMINT) and its interactions with a vibrant innovation cluster that involves large companies as well as local SMEs, traditional industries and agriculture as well as hi-tech start-ups, and private sector as well as public sector stakeholders such as the university and local PAs. He is currently working on a theoretical and empirical research effort to test the hypothesis that the replication of Sardex in Puglia, as a separate circuit called 'Apulex', could serve as a mechanism of sustainability for open knowledge, commons-based peer production, the third-sector, and in general all the activities generally regarded as outside the (capitalist) market, to complement and strengthen the more traditional innovation activities already taking place.

Luca Fantacci, started his presentation mentioning that his interest on the history of the monetary system comes from his dissatisfaction with 1) the way the official monetary system works, and 2) the way economic theory is accounting for the functioning of the monetary system. What one learns going back in history is that complementary currencies, today an exception, were the mainstream throughout centuries. Currencies were divided in internal currency (for the domestic economy) and external currency (for international trade, for merchants, luxury goods) and these were functioning according to completely different disciplines. The question of self-organization provides an interesting framing for understanding complementary currencies, especially today that such ideas need to be communicated to public administrations that operate in a top-down way, which can be frustrating. But self-organization is not only about bottom-up.

Considering the first element of the concept of self-organization, the self, Luca invited us to reflect on what is the atom, the elementary building block of complementary currencies. As he observed, economics start from the assumption of individualism, the building block is the individual. But in reality the atom is a “relationship”, not the individual. Finance is a relationship between a debtor and a creditor. According to Keynes “money is the evidence that we are at the mercy of our neighbours”. It is a vehicle of economic communication par excellence. So, what is the community in “community currencies”? There are many currencies that do not take the pain to draw the boundaries, and Bitcoin is an example, which is defined by the lack of borders. From a monetary, economic point of view this is problematic. There are other mutual credit systems in Italy that are not local but aim at a national or international level. But this is also problematic. As Luca argued, it creates the possibility of indefinite imbalances that cannot be detected or addressed. They would turn out to be like our current monetary system, which explains the desire of WIR to remain in the confines of Switzerland. In terms of organization, there is the idea that we should be open to competition in terms of currencies but competition works when it is about production of goods and not currencies since in this case money can become a vehicle of speculation. What we need is something that will allow the “invisible hand” to actually work since there is nothing wrong with the invisible hand given that it does work. The key problem identified by the current monetary system is that it makes it legitimate to pursue one's interest in terms of accumulation and there is a need for external rules that can reconcile individual and collective interest. That can facilitate money to disappear and stay only as a means for supporting economic and social relationships and for this reason, mutual credit systems like WIR and Sardex are interesting.

Finally, Luca gave a short introduction to his model of demurrage referenced by Paolo in the previous presentation, according to which excess credit in a mutual credit system could be used to support cultural activities, non-profit organization and in general what is called the third sector of the economy. More specifically, Luca proposes the creation of two circuits: the first is a typical mutual credit system with SMEs like Sardex or WIR. But since the economy is not only about businesses the idea is to have another circuit that touches the first circuit allowing SMEs to pay their employees with their credit. Then in order to “remind” these people to use their credit there is a rule dictating that if they don't use it, someone else should in order for money to flow. Like a demurrage system, if it stays still, you pay. More specifically, every month a certain percentage of credit goes to another wallet that still belongs to the credit owner but that needs to be donated to a non-profit organization of his or her choice, within the circuit. So, instead of simply punishing those that accumulate credit, this excess amount is directed toward third sector activities.

Finally, **Laura Sartori** analyzed the social dimension of complementary currencies identifying three main levels of study: micro, macro, and policy. The micro-level takes into consideration the different actors, consumers, businesses, founders of the network, and its members, which all have different strategies and approaches. From a sociological point of view, it is interesting to explore the 1) concept of trust (the bonding relationships that members and founders try to build together), 2) the motivations for the founders and members to be part of the network, which are context-related and evolve over time and could range from wanting to impact the local economy and feelings of solidarity, to personal interest such as the need to find a market, 3) the formal and informal norms that regulate behaviour, and 4) sustainability. At the macro-level one needs to study complementary currencies and mutual credit systems as organizations giving more attention on their structure. In this context, Laura introduced the concept of heterarchy, which lies between strict hierarchical organization and pure self-organizations. Another important analytical dimension is governance, since the more the system develops the more there is a need for decision-making and agreement. Finally, since every system is developed in a specific context with its own characteristics and particularities, the “replicability” of a system is a very important aspect that needs to be studied in a way to facilitate replication without harming diversity and variety. Laura concluded asking whether, at the policy level, a CC could be interpreted as a tool for local development? A tool for economic innovation? Can we mix the knowledge producers with economic producers?

The third panel discussed possibilities to combine the two modes of self-organization discussed in the symposium, namely complementary currencies and cooperative projects.

Jens Martignoni presented a short history of complementary currencies in Switzerland that appeared after the WIR, including his own Flecú. He then focus on a new model under development, motivated by the idea of combining complementary currencies and cooperatives, which are based on a pooling of the cooperative attitude of the people involved. These include a strong commitment to achieve common goals, which can be difficult or impossible to achieve as an individual. For example, an affordable rent might be achieved by “self-help”, i.e. substitution of paid work through the direct participation of cooperative members in the construction, operation and maintenance of buildings and real estate, as well as in the administrative work of the cooperative. This type of cooperative had a peak after 1918 where workers and little well-off people founded many housing associations, “which resorted to self-help to keep construction costs low and to make such housing at all feasible” (König, 2004: 30). A few housing cooperatives kept that commitment in the form of *Pflichtstunden* (duty hours) until today. For example, to the annual maintenance, cleaning or additional benefits such as playground will be made in self-help. The implementation of such an obligation is not always easy. Jens proposed a new approach to deal with this situation by encouraging participation and exchange through the use of a complementary currency toward the development of a suitable complementary

currency especially for housing cooperatives. The model which was designated by the name Quartierwährung (quarter-currency, city-district-currency) was developed by FleXibles Economic Research & Development, Zurich in partnership with the University of Applied Sciences of North-western Switzerland (FHNW).

The money creation of the new currency is done centrally by the cooperative in the form of fees or recognitions for community services. The currency can then be used for other purposes and capitalize talents and skills of its members. After specified periods, a part of the currency in the form of taxes or a part of the rent is returned to the cooperative. Thus, a constant and controllable circulation of currency arise, which also has the potential to replace a (limited) portion of the revenues in local currency (e.g. Euro or Swiss Francs).

Philipp Degens, provided a different perspective on the combination between complementary currencies and cooperatives by distinguishing different modes of involvement. First, co-operatives can be partners or members of a complementary currency scheme. Second, complementary currency schemes can be organized as a co-operative, applying co-operative principles and values. In this sense, such complementary currency schemes are governed as member-owned, democratically controlled organizations that promote their members. Philipp then presented a case study of a local currency system, Stroud Pound in UK (cf Scott-Cato, Suárez 2012). Unlike most LETS and Time banks, local currencies like the Stroud Pound focus on the inclusion of local businesses/SME; they are closer linked to market and formal economy and aim at encouraging local trade and production (cf Blanc 2011). A distinguishing feature of the Stroud Pound (as opposed to other local currency schemes like Brixton Pound, Chiemgauer, or BonNetzBon) is that it is organized as a co-operative itself. Its features included demurrage (stamp scrip, negative interest) and redemption fees (3%), and it reached in 2010 approximately 40 businesses participating and 10,000 Stroud Pound in circulation. Despite the fact that Stroud Pound was similar to other successful models such as Chiemgauer, it stopped circulating in 2012 due to lack of spending opportunities, limited acceptance of some of its design features (demurrage, fees), lack of trust among some businesses (perhaps due to bad experience with a previous LETS system), and lack of ownership and co-operative spirit. As a result, active participation of members remained limited. So, as Philipp stressed co-operative form does not automatically enable co-operative processes and successful self-organization it not only a matter of design but also of motivation and engagement.

Lucas Huber, a local entrepreneur and community activist, shared his experiences in building alternative currency systems in Zurich like an internet café with integrated timebank, named complino swap shop, which was the root of the Zürich Tauscht, CC-Hub, and Moneygrid systems. He also presented a different perspective focusing on the role of technology introducing his new start-up jeema solutions, which is developing a versatile software platform for community based organisations including an exchange platform, which will be used as a software base for moneygrid. Jeema is based on the Odoo Business Software Framework, whereas the marketplace and community currency functions are available from OCA Vertical Community project (also used from wezer.org). Finally, he presented his most recent project, a Swiss Startup KOINA AG, <http://www.koina.cc>, which aims to create an innovative currency System based on Odoo as Frontend and Eris Industries as crypto transaction engine based on the blockchain technology. The heart of the KOINA system is its innovative currency generation mechanism. KOINA are created by a delivery promise into the future from producers to the KOINA community. The underlining principle is a unilateral/social smart contract (one2all) instead of a bilateral contract (one2one). In this sense, KOINA is a debt-free positive monetary system.



Figure 6. a) The “special” Flecü banknotes that were designed to remember the past interactions that took place, b) Brett Scott presenting his “five pillars of Wikipedic finance”.

The day closed with two concluding presentations on how small scale initiatives can eventually bring global change. First, **Brett Scott**, an activist with expertise in alternative finance and author of the book "The Heretic's Guide to

Global Finance: Hacking the Future of Money"² developed the main argument of his book by demonstrating the high complexity of the global financial system and the need to decompose it, following a hacking mentality, and understand it in depth. He stressed that the various local initiatives, as the ones explored during the COMPARE symposium, cannot be viewed in isolation and his presentation attempted to tie them to a broader project to 'democratise' and open up the financial system more generally. To do this Brett sketched out a vision of 'open source finance'. In much the same way that open source software culture seeks to prioritise participation, access to common resources, transparency and collaborative culture, so an 'open source financial system' would be one in which 1) people had the ability to be creative producers of financial services, not merely passive consumers 2) people had wide access to appropriate financial services 3) the system was subject to meaningful transparency and 4) allowed for collaborative cultures to emerge, rather than only prioritising individualistic competition. In order to achieve this vision, work needs to be done at different levels, at the level of money itself, at the level of financial instruments, at the level of financial institutions and at a deeper cultural and political level. Specific initiatives may help to fulfil elements of this broader goal.

Finally, **Alexandros Kioupiolis** sought to draw out the political implications of various initiatives in self-organization which pursue transformative effects, fostering social justice, equality, democratic participation and sustainability. Such ventures include work collectives, housing co-operatives, self-managed enterprises and complementary currencies. These experimental endeavours address social needs and problems that are not met adequately by the market and the state, particularly in times of socio-economic crisis. By the same token, they develop alternative infrastructures which can put in place another key sector of social life that is relatively autonomous from or even antagonistic to state and market structures, and is informed by principles of decentralization, social participation, equity and sustainability. Another significant effect of these alternative ventures is that they prefigure a different form of social life, which can help to expand their example and to attract wider social strata to such processes of socio-economic change. At the same time, they cultivate another consciousness and new modes of social relationality among their members, educating people in an ethos of collective self-governance on a standing of equality, mutual respect and care for the natural environment.

The final point of the argument was that contemporary initiatives in democratic, equitable and sustainable self-organization need to enact a politics of *hegemony* if they are out to establish a wider alternative sphere that will reduce the dominance of market and state logics, and if they want to ward off the danger of co-optation, social isolation and irrelevance for social majorities. Hegemonic politics implies here a process of conscious political construction which builds deliberately a wider community of struggle and creativity, defines a political project, creates new collective identities, engages with power relations so as to alter dominant hierarchies and exclusions, and appeals to society at large, seeking to win over people's hearts and minds to a project of social self-transformation.

Day 3: Kalkbreite cooperative, self-managed spaces and the COMPARE assembly

The 3rd day started with a guided visit to the Kalkbreite cooperative where some of the symposium participants were hosted. Genossenschaft Kalkbreite is the newest housing cooperative in the city core of Zurich. The mixed-use development is the material consequence of a decade-long political process, which follows the cooperative housing tradition in Zurich, and the new movement of cooperatives for sustainable lifestyle in cities that started with Kraftwerk1 (brief introduction to Kraftwerk). Kalkbreite aims to lay out a social, economic and ecological response to the current multiple crises in Europe, and stands as alternative to a solely profit driven commercial use, the typical choice for city center development.



Figure 7. Two different views of the Genossenschaft Kalkbreite

² <http://suitpossum.blogspot.ch/>

The site selected for the project is a former tramway repair shop in Zurich-Aussersihl that was replaced currently by a tramway depot, over which is unfolding the new mixed use. The spatial program is based on principles of flexibility and modularity, and the materialization of its conception is the result of a design competition (design by Zurich-based firms of Müller Sigrist Architekten AG with landscape architects HAAG.LA, and engineering by Dr. Lühinger + Meyer Bauingenieure AG). At present it hosts 256 inhabitants in various residential arrangements (89 units) that accommodate a relatively wide social diversity, including disadvantaged groups, and also 5,000 sqm of shops, restaurants, offices, studios, and the Houdini movie theater. For residents there are various common spaces for meetings and interaction like the Foyer, a cafeteria, a laundry-salon, a bed-and-breakfast with twelve rooms, office working places, conference and sitting rooms. Among the novel housing forms are the individual studios with kitchenette clustered around a shared space including a larger kitchen - in the cooperative there are three such clusters, twenty large households for about fifty residents who maintain a common professional kitchen, dining and living space, and also other types of large apartments. There are possibilities for exchanges and permutation within the residential arrangements or for commercial uses, through what is called Joker-spaces that are spread throughout the building and could be rented for a limited timeframe. The continuity of circulation flow within the housing cooperative is realized through internal horizontal connections - "rue intérieure"- and outdoors through roof terraces and stairs that lead to the public courtyard / garden built over the tramway depot. This common courtyard is part of the urban green system and is open to the general public. A service center located in the entrance area operates and maintains the entire system, functioning as an information and coordination hub in Kalkbreite.

Measures toward sustainable urban lifestyle are practiced through minimal energy consumption and through the car-free condition; through limiting the space consumption (average of 35 sqm/resident) and insuring an affordable rent; as well as through the participation of the cooperative members in the planning process. In addition to a bike parking for 300 bicycles, Kalkbreite benefits of a central location in proximity to multiple city services, including good public transport connections. Being built according to the Minergie-P-Eco-Standard the building requires little heat supply, which is generated by a groundwater heat pump, and targeted measures on the electricity and water consumption minimize the consumption in the apartments.



Figure 8. Res Keller, the manager of Kalkbreite presenting the history of the cooperative

In its urban context the civic presence of Genossenschaft Kalkbreite, or Chalchi, is a catalyst for change, one more step within the ongoing project for collective living within the crisis, and proposing a model of everyday citizen activism for sustainable urban life. At present the cooperative is planning the second project Kalkbreite 2 on former railway land in Zurich Kreis 5.

The manager of Kalkbreite, **Res Keller**, gave us a short overview to the evolution of the project, from its very beginning nine years ago when the cooperative started with ten members, until today. He answered many questions and showed us around in the common spaces of the cooperative. Afterwards, we had lunch cooked by a chef whose restaurant is a member of the cooperative, and started the final panel of the symposium dedicated to informal self-managed spaces with case studies from Belgrade and Zurich.



Figure 9. From top-left, clockwise, we see a) a wall where kalkbreite residents declare a set of objects that they can share with their neighbours like a trumpet, a skateboard, a telescope, etc., below the signs for the shared sauna and “box 1”, a space whose exact use is subject to participatory decision making. b) a shared library and living room, c) a shared common space of a “cluster” of 10 flats, the only spaces that have balconies, and d) the shared restaurant.



Figure 10. Phlipp Klaus and Res Keller introduce the cook of our lunch at the Flex-3 room of the Kalkbreite cooperative, which was flexible enough to accommodate us both for lunch and the following panel

Iva Cukic and **Marko Aksentijevic** delivered the talk "Ministry of Space: Self-organization in the city" addressing the socially engaged campaigns of the collective Ministry of Space in Belgrade. On the one hand, the Ministry of Space explores the possibilities that art opens up, as a medium to raise public awareness, toward solutions to important social issues. On the other hand, as this collective connects social activists, socially engaged artists, architects and citizens, it mobilizes citizens to engage in building a more just society. The four members of the Ministry of Space come from various academic backgrounds namely architecture, political science, anthropology, construction engineering etc. Of course, often in their work they partner with other similar initiatives and with the academic community. Iva presented some of the most visible through the media activities of Ministry of Space, giving detailed information background, including informal stories, and discussing the trade-offs in the implementation of their projects.

Expedition Inex Film is a do-it-yourself action that reconverted an abandoned building into a space for work and cultural production, and into a representation venue for numerous groups and individuals. After some years of managing the reconverted Inex Film space, the collective had passed the responsibility to other groups, but remain an important actor in its operation. The cinema action “The Written Offs Return” is a campaign to turn public attention to dubious privatization of a large number of cinemas that de facto resulted in their closing down, with the subsequent

lack of cultural spaces in the city. The Street Gallery is a pioneer venture that reconstructed and revived a neglected public space, turning it into a vibrant open art gallery, and managing and operating this new cultural space with the resources of the collective. That implies a significant effort from the four members of the Ministry, which is mainly voluntary and based on their commitment to provide an alternative and self-organized stage for cultural activities in Belgrade. Finally, they presented their more recent actions aiming to inform the public about the big development project “Belgrade on Water” (see Figure 11).

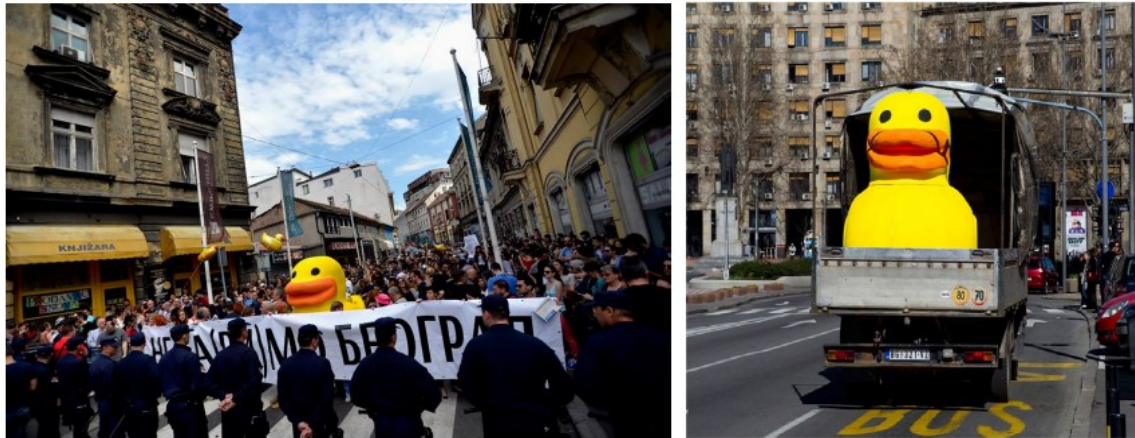


Figure 11. The symbol of resistance to the “Belgrade of Water” project, which was more effective in mobilizing hundreds of citizens to express their opinion regarding the developments in their city than the official means of “participation” provided by the local authorities

After they finished their presentation, Iva and Marko surprised us by going back to the first slide to start over, this time highlighting the failures and difficulties appeared in the very same “success stories” presented before. For example, they mentioned the problem of previous habits with local residents whose life changes when space is appropriated for other uses, as in the case of the Street Gallery, the difficulties of decision-making under diversity and the need for time to reach consensus, and the delicate role of the leader of a movement and the difficulty to become a “vanishing mediator”, a term introduced in the COMPARE vocabulary by Alexandros Kioupiolis in our first meeting in Sardex, and which returns often in our discussions on self-organization.

Marc Neelen from STEALTH.unlimited presented the Smarter Building initiative (Belgrade) which, since 2012, deconstructs the existing norms and models underlying the unattainable apartment purchased on the market, in a context where, as a result of privatisation of societally owned flats, 97% of housing has meanwhile become privately owned. With average household income of 520 euro/month, and an average purchase price of 1400 euro/m² - housing has become a sheer impossibility for the yet not-haves. Around 140.000 people are paying today excessive rents on the unprotected private market, and many people into their 40's have no choice but to live with their parents or grandparents. Smarter Building is open to people willing to jointly engage – in a “smarter” way – by planning collectively, investing responsibly (their time, knowledge, work skills and/or financial resources available) and building intelligently. Taking a twist with the notion “smart house”, “smarter building” suggests that housing should – through a collective process – be much more a social response, rather than delving into smart materials and energy efficiency. According to statistics an average household spends 15% of their income for apartment and utilities, which makes about 80 euro/month. Smarter Building starts thus from the question: can a new to be constructed apartment be built for that amount, including the monthly utility costs? In order to make it possible, it proposes a drastic reduction of expenses, a cooperative based model that includes labour based investment, as well as a do-it-ourseleves production of the main construction elements - like structural prefab wall panels filled with straw bales. With this, it arrives at a construction price of about 320 euro/m². In a search for a non-profit housing model, Smarter Buildings is currently facing the acquisition of land under favourable conditions, as well as access to starting capital without a long-term drag. These are conditions that would provide it to become a break-through project; a precedent for others to follow.

Finally, **Vesna Tomse**, a local urban activist and member of INURA, identified a number of issues with the typical cooperatives in Zurich, being mostly middle class projects, discriminating of socially weak groups especially in «old» cooperatives, rising demand of surfaces and rents due to ecological and architectural quality, and described the informal self-managed spaces movement in Zurich. She then presented shortly the history of informal self-managed spaces in Zurich including squatting, like the Autonomous Beauty salon that was recently evicted, and autonomous cultural centres, like the famous Rote Fabrik whose legalization lead to the ossification of structures (e.g., difficult access to organisers), the employees taking a civil servant status, increased control by the city and imposed legal norms, but also underutilisation.

The day finished early for our guests to have some rest before the final event of our symposium: the **COMPARE assembly**, a semi-public event organized at a recently established shared working and living space called Hohlzke³. Although some of the participants of the first days had to skip this final part, the size of our group increased with the addition of new guests that were informed for the event through the INURA e-mail list. The evening started with an introduction to Hohlzke by **Katya Nikitenko**, a Greenpeace activist living at Hohlzke and working at the Kalkbreite cooperative (where the Greenpeace offices are located in Zurich).

Because of the large number of people and the intellectual intensity of the symposium until that point we decided not to engage in more “serious” discussions but performed a big circle of self-introductions followed by a light dinner and more discussions in groups. The convivial atmosphere was interrupted by an impromptu performance by the musician of the COMPARE project, Philipp Klaus. After the first improvisation with his violin, Philipp asked Panayotis Antoniadis to provide a final statement for the official “closing” of the COMPARE project. Panayotis represented the explorations of the COMPARE project as an ever growing sliding tile puzzle and encouraged everyone to keep adding pieces on the table and keep moving them around without too much effort until they self-organize into a meaningful image. Philipp then improvised with his violin inspired by the word “puzzle”⁴ and set out the soundtrack for our future explorations of self-organization with moments of intensity, complexity, and revelation, among others :-)

Conclusion

The constructive examples of self-organization studied in our final COMPARE symposium point to a set of premises and principles for collective action which can foster democratic and ecological social change in our times. The first principle which they enact is bottom-up self-organization on the basis of direct democracy driven by social needs and justice, offering an alternative to top-down bureaucratic rule by the state as well as market hierarchies, exclusions and the pursuit of profit maximization. Second, they endorse and valorize diversity, as they seek to realize their aims in variable ways according to differences of context and collective choice, rather than sticking to a universal, prefabricated model. Third, they are inherently transitional and impure, as they are not fully independent from the state and the market, but they embody and fuel tendencies and dynamics which point beyond state-and-market structures. Fourth, as a consequence, they are intrinsically agonistic as they vie for survival and expansion in contexts dominated by different logics and forms of organization. Fifth, they adopt the network form in order to coalesce, to mutually support each other and to construct a broader alternative domain. These network-forms of co-operation tend to be open, flexible and decentralized.

Our final task was to build a list of relevant questions, whose answers can help the comparison between different experiments on self-organization and enable the transfer of knowledge between different locations, contexts, domains of action, etc.

- 1) Decision making: What is the decision-making process in your community/organization/group? Has it changed over time? How conflicts are resolved? How do decisions reflect the deliberative process?
- 2) Hierarchy and roles: Is there a hierarchy in your group? Which are the most important actors and their roles? How balanced is the “workload” between members?
- 3) Local vs. global, inclusiveness, scale: How easy it is for someone to join your group? What ways connect your community to larger networks? Can your model be easily replicated? Can it scale?
- 4) Design details that make a difference: Can you identify one or more important non-obvious “design details” that you believe can contribute to successful grassroots organization and self-governance?
- 5) What does self-organization mean?: What is the “self” that acts independently from outside control? What are the elements of “organization” introduced?

As a final remark, the ‘self’ is a motive force that in natural/physical systems arises from the “fall” towards equilibrium (in technical terms: the minimisation of free energy) and in social systems arises from individual action. In both cases constraints are needed, otherwise one gets random chaotic motion. The nature of the constraints is very different in natural vs social systems, but in both cases some kind of memory mechanism is at work, which can be regarded as the simplest and least contentious mechanism of self-organisation. For natural self-organising systems to remain self-organising they need to be open and to interact with an outside environment (source of free energy), otherwise once they reach equilibrium they stop (‘equilibrium is death’). The complexity of human nature likewise requires social systems to adopt an open governance model, in order to achieve long-term sustainability. The mechanisms, processes, and epistemologies underpinning these two realms are radically different, and yet they evoke each other, and it is interesting and intellectually stimulating to COMPARE them.

3 <http://hohlzke.org/>

4 <https://www.youtube.com/watch?v=EIhr1UzVC18>

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