

# **SYSTEMICS AND THE MUTUALLY BINDING ECONOMY NETWORKS; A KNOWLEDGE BASED APPROACH FOR SUSTAINABLE COMMUNITIES**

**Authors<sup>1</sup> : Honorato C. Teissier Fuentes and  
J. Gabriel Mendoza Santillán**

## **ABSTRACT**

The monetary concentration due to global financial-economic system finally conducts to increase the monetary inequity and unsustainable communities (Gini Index, OCDE).

Mutually Binding Economy Networks pretends to close the distance between producer and consumer, generally poor communities and rich people all over the world, by supplying social mechanisms usually for products distribution; solidarity, equity commerce, responsible consumption, loyal economy, etc. In the most of cases these communities works in an empirical level of the collective intelligence. The exchange results obtained by primitive communities were competitive with Nature, even with others communities in such primitive world. In front of today global economy, the communities constructed by old empirical models are going to be dead in a few years if they do not include the knowledge in their networking ways.

This article describes how in small communities, a knowledge based network improved by systemic methodologies and models, could allows best results in a short term for the community dynamics, favoring the emergence of a long term perspective in a sustainable development. In addition, some results in real cases in these communities and networks, in the northeast of Mexico are shown.

**Key Words;** Systemics; Mutually Binding Economy Networks; New Economies Communities; Knowledge Based Sustainable Communities.

## **I.- INTRODUCTION; EQUITY COMMERCE, RESPONSIBLE CONSUMPTION AND LOYAL ECONOMY**

Social web interaction from which new Mutually Binding Economy paths are taken, are placed at the bottom of a new long term and hopping human development.

Between these paths, Equity Commerce (EC) is one of the principal today activities carried on in several countries, particularly in stable or advanced economies countries, to turn (Laszlo, E., 2000) to this new searched world (Hayes, R., 2002).

---

<sup>1</sup> Authors are members of the *Systemic Approach Group in Sustainable Development of Mexican Regions*, in the Faculty of Systems, at the Autonomus Coahuila State University (UA de C), Saltillo, Coahuila, México, and can be reached by: [teissier@mail.uadec.mx](mailto:teissier@mail.uadec.mx) and [gmendoza05@hotmail.com](mailto:gmendoza05@hotmail.com).

Also cofounders of Huakori Group, A.C., allied to Syntony Quest a Non Profit Organisation on USA.

## **A Knowledge Based Approach for Sustainable Communities**

The EC objective is to give a just payment to the people in rural, suburban or urban communities who produce, extract and distribute, transform raw materials or make final products. Social organisms like non-profit organisations, citizen groups, ecologist groups and environmentalists, do this altruist work, frequently without a demanded remuneration. Some countries like Canada have even a State Secretary dedicated to benevolent work, generally carried out by retired people with free time to offer to others who need it. There fore, people who have more can give some help to people who have less, nevertheless reaching the compensation is other than monetary.

Since more than a decade in Mexico the “Red Mexicana de los Pobres con Dignidad,A.C. ” (Poor People with Dignity Mexican Network), is working like a non profit organisation supported by the Mexican Episcopal Conference, Caritas México, A.C., and a big number of other civil organisations, spread in more than 20 states of Mexico promoting, transporting, distributing and selling products from margined poor communities.

At the same time in the sustainability direction, this Network promotes the Responsible Consumption (RC), as an important component, complementary to the EC.

Self consumption is promoted in those communities as well, privileging seasonal, organics and non industrialised products.

These two elements help these communities to reach better quality life, promoting material health to people and simultaneously facilitating goods and services interchange. All this contribute to improve the Nature-Man relationship which means to be in “syntony”, as is conjointly promoted by Syntony Quest, in the USA and Huakori Group, in Mexico, organisations that work together in such a transformative processes.

## **II.- MUTUALLY BINDING ECONOMY COMMUNITIES AND SOCIAL ETHICS**

The economy is an interaction social tissue permitting goods, services and knowledge interchange in a population (Capra, F., 1996).

This is well known by most of the economy schools. Nevertheless, consumption society based in the neoliberal system, supported by multinational structures, favour and impulse the flux, commerce and consumption (Rostow, W., 1963) of highly industrialised and pollutant products, privileging disposables. Since they focus on the growth of monetary and financial capital, mainly unscrupulous enterprises over explode and degrades natural resources zones, which are at the end of the so called “productive chains”.

In the opposite, mutually binding Economy Networks are growing in other countries including Mexico, promoting the flux of knowledge by mutual learning among the community members, and between them with the other communities’ people in order to create Evolutionary Learning Communities (ELC) (Castro-Laszlo, K, 2001).

## A Knowledge Based Approach for Sustainable Communities

It would be interesting search to answer the Kathia Castro-Laszlo question ; “How to create the conditions for an ELC and the emergences of a design culture?” (Castro-Laszlo, K, 2001), because it seems that the emergency of the evolutionary process is present now, at last in the Mexican Mutually Binding Economy Communities case in which the knowledge economy is present. Nevertheless we could not to say that it is under a design culture, because it was not conceived like that.

In the other hand, if the knowledge flux is made by an ethic and solidarity (mutual binding) path with the intervention of self-responsibility, it would favour the communities evolution based in its own creativity and its capacity to self-learning. It also promotes a major quality of life with dignity, based on social ethics, mutual respect, justice and solidarity, characteristics which are reinforced by a positive feedback under the knowledge interchange. Such a tendency is given by the evolutionary potentiality of the Human Kind.



**Photo1.-** Members of the “Red Mexicana de Economía Solidaria”, Northeast Region, playing the Web of Life systemic game, using it as a metaphor of knowledge interchange between community members, In the Tianguis Purépecha in Parras de la Fuente, Coahuila, México. February 2008. Facilitated by Huakori Group.

In the material plane, where usual products and services interchange is carried on, communities like The Purepechas ethnic group in Michoacan, like others in Veracruz and Puebla in Mexico, have been reached an internal flux systematisation, without the use of currency.

Internally, as it was done in the Tianguis Purpecha, an itinerant market is established going around different states and cities of Mexico, promoting its products by no money means. To do that, the Purepecha people as a community, has created

## **A Knowledge Based Approach for Sustainable Communities**

something in substitution of the current national money, which at the interior of its Mutually Binding Economy Tianguis. In this case, they use like as a metaphor “la Penca”, common Mexican name assigned to the flat stem-leaf of the Nopal plant, with a pallet form, to name the current circulation money used in the Mutually Binding interchange.

Here, like in others communities using interchange in a non lucrative way to search the Mutually Binding economy, people make it with the free criteria of “to pay” for a product or a service several times its thru market price, in opposition to what happens in the global market. That is done in a complete free and conscious action, in attention to the selling people needs, with the only purpose to help each other.

The common target is to circulate gods and services, inside the community, to reach common benefits for all of people, over the individual benefit. The common wellbeing of the community, in this kind of economies, is privileged over to the individual or familiar wellbeing, then, its stability goes increasingly. But more important than this, is the fact that is doing in syntony to their human potentialities and natural resources. The Tianguis Purpecha has reached its 14<sup>th</sup> anniversary in 2007, and recently they was in Parras de la Fuente, a municipality placed 90 min. driving to the Southwest of Saltillo, the capital city of Coahuila, in the Northeast of Mexico, where Huakori’s Group members had participated. (Photo-1.).

All this process approach to the Social Ethics (Teissier, H. 2005), is generally absent in the consumption economies which search and explodes the immediate satisfaction of the individual, the egoist commodity and the personal benefits, over the human dignity of its producers, who are exploited directly or indirectly by the buyer and the commercial intermediaries in the distribution chains and networks.

In the consumption economies where buy at the lower price is considered the “best buy”, there is a lack of consideration on detriment of the producers and their natural resources, done through the commercialisation. Since the buy is made in a “competitive” manner, as the fixed levels by the international commerce system; the World Trade Organisation, the OPEP, the OCDE or others organisms, it is well justified and prized.

At the limit, the consequences are overcharges in the natural ecosystems capacities, to the Nature services and products generator Systems (Teissier, H., 1998), also for the marginal communities in the Planet, most of them living in impoverished countries with unpaid external debts, who brings the maximum production volumes, generally beyond the natural and human systems restitution capabilities. This explains the non sustainability, the natural systems degradation, the expended and generalised poverty, the inhuman alimentary rates and the worst health conditions found in a great part of humanity, among other impacts derived form the global economy system.

### **III.- KNOWLEDGE, COMMUNITY DEVELOPMENT AND SUSTAINABILITY**

From the up-cited cases it is clear than the basis of a health community economic development, human and naturally, is not only the monetary circulation, nor the products or services interchanged, but the human-nature interactions network.

In the Mutually Binding economy, knowledge, comprehension and wisdom are interchanged in an empirical form, and this state of such community could perform a revolution in the human social system, a new social system all over the world.

While in the global economy system the material values are fostered, in the novel emergent economies (Bunnell, P., 2006) the Human Being is searching something more than obviously is not placed in a material dimension; data, quantification or information, levels cited by Russell Ackoff as the primitive ones, in the path of wisdom. Nevertheless, those empirical forms could be improved in none an imposed way, facilitating communities to transit to their own development. This form could be sustained in a non formal knowledge exchange, sheared and loyal, but definitively induced by dynamic levellers out of the system.

When we talk about a material and cognitive interchange network inside of a community, we talk in a systemic conception in a non explicit form. But more than that it would favouring the collective intelligence creation based on shearing knowledge.

Contrary to what is happening with the so called “knowledge societies”, whose bottom is foster their incubation to privilege the international economic, industrial and commercial growth of products circulation oriented to monetary objectives, the Mutually Binding economies reinforced by sheared knowledge, favors the development and not the growth (Ackoff, R., 1993), the stability and not the turbulences nor the environmental or ecologic disequilibrium, which improves to advance to a sustainable society.

A community with a Collective Intelligence, shares its knowledge when it have a clear value of its natural resources for its life and pass it to its descendents, appreciating those beyond their prices in the global market. A consumption based society fails to recognise, ignore or forget those non tangible values contained in the supporting life ecosystems, over the Planet.

In the deep, the sustainable development is stopped by heavy presence of the monetary-financial world system, who gives more to whom has more (Teissier, H., 2006-1), spreading individuals, fragmenting communities and its knowledge, conducting to a human degraded existence.

**IV.- THE IMPORTANCE OF KNOWLEDGE IN THE DEVELOPMENT OF SUSTAINABLE COMMUNITIES**

The sustainability could not be reached, not even approximated, if our communities don't arrive to have a collective intelligence, to permit us to learn deeply the Nature Knowledge.

And the evidences show that the global economy considers such Nature Knowledge has no value as it is not susceptible to enter in the monetary scale, let say to be valued like an input for the industrial-financial process and products generation, demanded by a growing market impelled by the consumption.

But monetary value is not the only one, what explains, by example, the illness prevention like basic knowledge of the traditional medicine has been greatly delayed to input to the occidental medical world.

It would be recommendable a collective intelligence expansion, based on Man and Nature profound knowledge to create learning communities susceptible to approach a sustainable life.

All other mimetic present "green" forms, invented by the global economic system, are only chimera inside a sustainable development frame.

It is only by this than the profound knowledge W. Edwards Deming talks in his Total Quality Theory (Deming, W.E., 1989) is so difficult to be reached by the contemporary consumerist society.

**V.- NEW POSSIBLE ATTRACTORS TOWARDS SUSTAINABILITY, TROUGH MUTULAY BINDING ECONOMY**

The growing exploration of new Mutually Binding Economy schemes could generate complex attractors (Chaos Theory) converging on the gestation of sustainable communities.

Contrary as said by Brundtland Report, the consumption economy is not compatible with sustainable schema, since its powerful depredation capacity over the natural systems, as has been demonstrated in the last four UNEP GEO's reports (GEO 1, 2, 3, and 4), also said by the 2008 last editions of the WorldWatch Institute, in which new economic sustainable options, accordingly the natural systems capacities.

In front of the great atmospheric alteration by anthropogenic causes, and derived on the Global Climate Change, accepted in 2007 by the Intergovernmental Panel for the Climate Change (IPCC, 2007), humanity affront today and by the next decades, tremendous changes in the climate structure of the hole Planet, carrying on consequence not only over the lost of a great part of the living species, but unpredictable human health and life processes affectation over the world.

At the turbulence present time, announced 15 years ago by system people like Russell Ackoff, James Lovelock and Frijof Capra, the Mutually Binding Economy is seen as a

## **A Knowledge Based Approach for Sustainable Communities**

dissipative growing media in which the world can transit to sustainability, without facing the financial-economic global system, as attempted by the 60's and 70's ecologist movement on till present, but without successful.

The Mutually Binding Economy could form new complex attractors, permitting us to escape to the actual system, which had caught the most powerful country economies.

A test of this is the China inclusion to the global economy, a country opposed by centuries to the west culture where the neoliberalism has irrupted in an extreme form, causing severe alterations even to the United States command as well as rest of the Planet.

All this has done in detriment of its environment and the own China's people, increasing the inequity with a growth of its consumerism economy, which is propagating over the world at a rhythm of about of 10% annual.

### **VI.- THE SYSTEMICS IN THE MUTUALLY BIDDING ECONOMY NETWORKS OF SUSTAINABLE COMMUNITIES**

Nevertheless, the community transition to the Mutually Biding Economy for the sustainability is not easy and non trivial affair, neither. It is necessary to get certain systemic components to support this transition

Primarily, it is necessary to pass from events to behaviours and then search opportunities to evolve to dynamic structures. To pass form events to behaviours means to create social processes or to change the present ones. This is the most difficult part, since implies the change of old paradigms strongly rooted in our life ways. Some of them are:

1.- To pass from the communitarian tank conception to the flux view. It means for the community to abandon the old idea than the resources are there, stored like a divine gift to whom we have the right to access by the fact they are in our territory or domain. It must be transformed by a perception of the required inputs for the life holding come from processes with flux and these must be permanently maintained, avoiding its exhaustion, precisely to search the sustainability.

2.- It is essential also, to pass from the event emotion to the interaction continuity among the subsystems, processes and actors in the community. That is; the community must create an internal necessities and capacities network, where everybody knows which are their potentialities that can help the community with knowledge, facilities, experiences and talents, to be pivots of the communitarian evolution in that different kind of economy.

3.- It must be changed the casual empirics forms to the social tissue sustained in the natural capacities of the own community. It is necessary to avoid the creation of artificial states that could make fissures in both learning processes and evolution. By the opposite, it is important to conserve traditions and customs, lighting such

## **A Knowledge Based Approach for Sustainable Communities**

particularities whom are distinctive from others communities, which may be the values to interchange in the future.

4.- Favours to pass from dependence to interdependence, and then to the search of social leveraging points that could motivate the community actors to rise its human quality of life (the Be), by replacing the having habits to a new vision based in the knowledge; to know Be, to know share and to know live, as components of a continuous learning process, to increase the profound knowledge for life.

These four points comes form Systemics and they provide an evolutionary complex process that could facilitate the Mutually Binding Economy Communities to transit to the sustainability.

A crucial point is that a Mutually Binding Economy could not be developed from outside of the communities that form the Network. It means what it can be done, in such a case, is to facilitate the communities to a self-design their own mutually binding economy processes, in frame of co-creation (Laszlo, A., 2001) to follow a self-learning path.

### **CONCLUSIONS**

The Mutually Binding economy Communities and its Networks supported by the Collective Intelligence, the System Thinking and a cognitive conception could be converted, with a strong possibility, in the new humanity attractors. Certainly we have to improve in its design and construction, like Kathia Castro-Laszlo cites in her studies, since the present economic structure has eliminated the possibility that it could be done by emergence, spontaneity or hazard. If it is reached on time to gestate this kind of communities and its proliferation is made vigorously, Human Kind could have a survival hope. If not, we will see the consequences, first against the poorest and unprotected people, which means all over the majority of the countries in the Planet (Lovelock, J. 2007).

### **REFERENCES**

- Capra, F. 1996. "The Web of Life; a New Scientific Understanding of Living Systems.",  
Anchor Books  
ISBN 0-385-47676-0
- Castro-Laszlo, Kathia. 2001, "Learning, Design, and Action: Creating the Conditions for Evolutionary Learning Community"  
Journal "Systems Research and Behavioral Sciences",  
Vol. 18, No. 5., Copyright, 2001, ISSS.
- Deming, W. Edwards, 1989. "La calidad, productividad y competitividad: La salida de la crisis "  
Ediciones Díaz-Santos, S.A. Editado por Cambridge Press.  
ISBN 84-87189-22-9 (Lengua Española) 1989
- GEO-4, 2007. [www.unep.org/geo/geo4](http://www.unep.org/geo/geo4)  
Consulted in December 2007
- Hayes, Randy. 2002. "Restructuring the Global Economy: Eradicating Breton Woods and Creating



## **A Knowledge Based Approach for Sustainable Communities**

- New Institutions”, The 2002 Johns Hopkins Symposium on Foreign Affairs series, Paragon or Paradox?, Capitalism in the Contemporary World. March 14, 2002.
- Laszlo, Ervin, 2002. <<Virage Global>>, Les éditions de l’homme 262 p. ISBN 2-7619-1701-4
- Laszlo, Alexander. 2001. “Epistemological Foundations of Evolutionary Systems Design” Journal “Systems Research and Behavioral Sciences”, Vol. 18, No. 5., pp. 307-321. Copyright, 2001, ISSS.
- Lovelock, James. 2007. “La Venganza de la Tierra”, translation to the Spanish, from English Version; “The Revenge of Gaia” 2006. ISBN 978-0-713-99914-3 (English version)
- Teissier, Honorato. 1998. “Systemic Organisations vs. environmental degradation and fragmented vision: New Paradigmes on Environmental Policy” Pp. 97 a 110, inside Raynal, J.A. et al, 1998, “Environmental Engineering and Health Sciences”. 464 p. / pp 97 a 106. Water Ressources Publications, LLC, USA, 1998 ISBN 1-887201-17-3
- Teissier, Honorato. 2005. « Conception et application d'une strategie cooperative pour le developpement durable de la region sud de Coahuila, Mexique : une approche systemique ». Library and Archives Canada, Canadian theses, thesis (Ph.D.) Universite du Quebec à Chicoutimi, 2005. ISBN: 049410936X
- Teissier, Honorato. 2006-1. “El Desarrollo Sustentable: Su influencia en la Cooperación Internacional y en los planes y programas de desarrollo en México”. Editorial Plaza y Valdés, S.A. de C.V. México, D. F., 2006 ISBN.- 968-6628-52-5 (UA de C), ISBN.- 970-722-545-9 (Plaza y Valdés, S.A.)
- Teissier, Honorato. 2006-2 “The Collective Intelligence” 50<sup>th</sup> International Conference of the ISSS. ISBN 0-9740735-7-1