

# The Development of the Collective Intelligence for the Sustainability: A Task of Democracy and Complexity

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## Abstract

Never before the humanity had such an amount of wealth accumulated in a few persons. And never there has been so much inequality neither humans have been so much indolent in the face of themselves and Nature.

The intelligence of the humanity focuses at individual levels or, in very small and privileged groups, obeying also to very particular interests. The aim of the social system is not anymore the preservation and evolution of the human kind, but to increase the concentration of power, enjoyed by a few. Then, if enough knowledge exists in order to change the processes, why does every day our environment is more degraded and we live with more uncertainty? This is a matter of democracy and community complexity. In Saltillo, Coahuila, Mexico, the proposal of the *Collective Intelligence Development*, was born from the emergent need of sharing knowledge, inside of an honorary group that works for the sustainability of the water resources, to ride in the directions of a sustainable future.

**Keywords:** Collective Intelligence, Sustainability, Democracy, Complexity.

## Introduction

The social-human system has presented an exponential physical growth, unique in the stage of the terrestrial life.

Since the appearance of agriculture, about eleven thousand years ago, the necessities that in primitive conditions required of great cunning and the use of force in order to survive, induced a process of matter and power concentration.

So, the intelligence gave the human race the maximum level in the ecological pyramid, and this species became able to eliminate almost any biological geological or physical opponent. Technology placed human beings beyond the borders of their enemies. The nature has been "conquered", according to the vision of the actual Western society.

However, now we know that the process that took us to the top possibly will drive us down again, and then we wonder ourselves: Will this be the last opportunity to escape from the attractor of the growth, refocusing us toward new horizons? Will our collective intelligence be capable to turn its eyes to life, on time to avoid the sixth massive extinction? Will the democracy be able to leave the model of political and economic power concentration, in order to drive us to search of the real sustainability?

## Prehistoric Intelligence

The need of force, in order to conquer the enemies, made the primitive man to conceive a form of intelligence that without knowing it, he took from the own nature.

The big power manifestations are hug sums of small forces that at the molecular level are able to induce devastating effects phenomena. The hurricanes, the tsunamis, the earthquakes, the changes in the magnetic pole of the earth are all effects of gigantic sums of infinitesimal forces which adjust to molecular or even smaller levels

The natural learning led to the primitive man to gather in order to add their small individual forces. He started formed families, groups, clans and tribes being hunter-harvester. This process generated a synergy. Having their fellow men associated not only produced new bonds but also created a perspective of them that induced to a group vision, creating what we may call the collective prehistoric intelligence.

Then he settled, forming small population nuclei where the fact to have neighbours, each time more and more, offered a potentiality which was absent when he was a solitary individual. The advantage was evident and then the growth of the human specie begun.

## The Power and Wealth Concentration

Once the main natural threats had been conquered, the man created models that allowed him to increase his domain. This is a paradoxically natural process. According to the ecologists, any species that is in a favorable environment and has no predators tends to grow in an exponential form (Mc. Naughton and Wolf, 1973)

There is where the model of expansion finds the feedback loop that leads to concentrate more and more power and wealth, leaving a result of inequality, illness and poverty. The rich only wants more wealth, as a drug of which one could not escape, the same occurs with power.

However in the nature nothing grows unlimitedly (Meadows, D., 1992).

## A World Corrupted in Growing

Then, being without natural obstacles the human kind is token by the growth attractor, which become a bad habit as we observe at the moment.

It is not true that the economic system orders to grow and continue growing. The reality is that, like in an addiction, our mind induced by the desire to a better life or forced by the consumption society, creates new necessities. People demands new satisfactions and start sinking in the dependence of the growth.

It is interesting, but as we can see, it is the same principle that the cancer uses; a growth without control, which ends up by killing the same organism.

Not only is the number of inhabitants a measure of growth. The use of the energy, the new materials, the transport, the communications, everything demands a growth induced by the economic competition and the political or military superiority.

We could ask ourselves: To whom we do seek to be superiors? Who did induce this career?, To whom it benefits.?

## **The Model Works No Longer**

During several millennia humanity has been governed by the law of the strongest. In spite of the fact that the intelligence substitutes the force, there are models which continue operating and demand the use of the force in order to exert the power and the control over the majorities. Humans against humans.

With the emergence of the democracy in Greece, a new style of auto-administration of the society was created, applying the opinion and the wisdom of the senate as a representative in order to express the desires and the necessities of the nation's common people.

This representative model was based on the knowledge of their leaders, who as the maximum authority, defended the reason in front of the will.

Nevertheless, in the complex process of people reorganization of the towns, the democracy has been gone adjusting in order to arrive to the present model.

The knowledge and technology advances, added to the large volumes of world population demand a representation at several levels, reaching the international one, represented on the great organizations like the UN.

All this system operates under the principle of the right: laws and regulations that theoretically settle down under the base of resolving conflicts of individual interests or matters, under a neutral superior authority, with the objective of assuring peace and concord between the elements of a race.

However, we observed that such neutrality is hindered because it is difficult to remove the power from who has been in touch with it.

The same system that reigns tries to impose laws that favour it, using of the triple alliance (economic, political and military power). In this way, the processes are adjusted in order to maintain an agreement between the three spheres and achieve above the international right and on behalf of the "democracy", actions like the invasion of other countries in order to impose the democracy. We have seen it recently in the Persian Gulf, Afghanistan and Iraq wars, on which the economic origin is hidden under the coating of the freedom of the towns, violating laws and international treaties.

This system is obsolete. It has been corrupted so much by the power of the money, that doesn't hesitate to reach the point of murdering thousands of people for maintaining the demands of the world economy in operation.

It is lamentable that such hegemony doesn't has limits which satisfy it, and imposes an accelerated destruction to the planet, with the death of the big ecosystems included, fields desolated on behalf of the war, economic growth, modernity and many other excuses.

We have arrived to the limit and maybe we have already reached the negative slope in the sustainability curve (Meadows, D, 2003).

## **The Systemic Knowledge and Inquiry**

The new artificial paradises, like the recently one built in Dubai, they demonstrate that the degree of corruption reached by the system permits such kind of extravagances, showing the inequality in front of the millions of human beings dying in Africa and in other poor countries around the world. The proprietors of these exclusive places are people that at least have succeeded accumulating the figure of a billion dollars, which is enough to order to build an artificial island in palm three forms, with luxurious residences in front of the Indic ocean.

The previously mentioned indicates that the system has already surpassed a while ago its limits and it is necessary look for another one, or risk a collapse.

But, how to look for? and find a different system? Will it be convenient to abandon the system to the chance or have the risk of its annihilation?

It is possible to attempt something more than sit down and wait the nature act with disasters like the tsunami in 2004, the hurricanes in 2005 and another to come.

We count, by fortune, with the knowledge that offers us the Systemic (Banathy, B, 1997). They are new alternative forms not only in order to act but also to think and establish the science and the philosophy in the XXI century.

All these permits us to have group vision, without disjoining the parts, what shows us a world of disaster, pain and damages caused by the alterations to the environment. It is due to this that we can obtain now a syncretic (holistic) vision, considering the effects, behaviours and tendencies, in order to propose a reflection about the global system aim and to reconsider about its future.

However, it is necessary to have forms of collective actions which would permit the humanity find new roads of peace and harmony with the Nature. Roads that, as the principle of Syntony Quest says (Syntony Quest, Org., 2006), look for the syntony of all the living systems on the planet Earth.

## **The Opportunity**

The human species has the great opportunity today to decide its road as is demonstrated by this 50th. Conference of the ISSS, organised around to the sustainability, democracy and complexity.

The knowledge gives us the capacity to respond to questions that less than fifty years ago they have been considered as an absurd. However, it is required more than that. The knowledge is not enough to transgress the limits of the logical reflection, which gives us the reasons but doesn't allow us to reach the understanding, fundamentally of the complex phenomena. The causes and their effects could not be close, neither in space, neither in time (Senge, P. 1990).

The emergency of social events like the ones happening with the immigrants in a lot of the so-called developed countries (the United States, for example), it doesn't have an explanation in the rational knowledge.

This gives as a result that the legislators, based on laws and rules sustained in the logic, are not able to find solutions to this complex crossroads. There are too many interests in conflict to make a clean and precise decision.

Probably, if we used the understanding instead of the reason, and we tried to synthesize instead of analyze, we could understand the necessities of those who have been expelled and obliged by the current social system, not by one or another country, but the whole system, up to the abandonment of human values that represent the homeland, the family and the customs and culture of origin to reach a "better life".

Perhaps what we should try to reach is not better economic levels, but superior capacities (Atlee, T., 2003) that permit to live more in accordance with the ecosystemic processes which support the evolution and the development of the biosphere, for more than two thousand and a half million years in the Earth.

But when the scientists and philosophers spoke some years ago about elevating the conscience of forming a knowledge based society, immediately, the economic-political macro system looked for a way of marketing this, creating the "economy of the knowledge".

Therefore, the understanding has become unthinkable, which remains beyond the knowledge (Ackoff and Deming, 1993). If the knowledge is reduced to a merely economic reason of change, it will be dealt as merchandise.

Would it be too much to request that we take the opportunity to look for the understanding and the wisdom, like a collective, in order to try to release us from the dangerous attractor of the economic growth? What kind of future do we want?

## Democracy, Development and Governance

Undoubtedly the democracy has been a positive road. The advance of the human development, impelled by the real practice of the democracy has been one of the greatest successes of the human history.

The Greek town, cradle of the democracy, reached a high level in development, synthesizing the human values and recognizing the unity of body, mind and spirit through the science and the philosophy, seeking the place that Man occupies in the Universe.

Really the Greeks achieved a high level not only for their philosophical, cultural and humanistic achievements, but for their integrity. It was their capacity to synthesize, to see themselves as part of a major "whole" that made them understand their internal value for themselves and for the rest of the system; what allowed them to devise the democracy for the development of the human species, which in that period arrived to its highest level.

Today we talk about democracy and we believe that it is achieved by depositing a ticket in a ballot box, as our politicians exemplify.

We are very far from reaching a democratic state like the one the Greeks devised, two thousand and a half years ago, mainly because of the degree of isolation in which we live, due to the analytic thinking and other factors. This was the father of the reductionism as well as many other social evils that paradoxically are those which block the true democracy and thus impede the human development. Today there are computers for everybody and Internet everywhere, but we still have a great lack in the human communication.

Having more hospitals doesn't make us more developed. Having a good system of preventive health that reduces the necessity of hospitals, it does!

But this is not business: the political power does not increase, neither the sales of medications provided by the big pharmaceutical industries; which is not convenient, since it forms healthy, intelligent and independent beings.

What we require in the search of sustainability it is governance (Dufour, J, 2002), "the search of controllable governments by the people".

## Sustainability and Understanding

Sustainability requires the understanding of the role that the human being plays inside the natural systems, like any other specie; and not like the owner or user of the services, materials, energy and goods that nature possesses, but like another entity that has the capability to break down the global system equilibrium in an irreversible form, annihilating great amount of species, including itself.

From such hypothetical understanding, it would be derived, if that is the case, the capacity in order to achieve the terrestrial ecosystem sustainability.

Since the intelligence is the capacity to establish links, relationships or bonds between apparently independent or remote entities, either temporal or spatially, it turns an indispensable factor for the sustainability.

Until now we are doing well. The difficulty arises when we found that such a condition should be satisfied to the level of the whole humanity, and not only to a personal view, not even a regional one.

While humanity doesn't achieve the intelligence to a collective level, very little we can speak about sustainability, while improvements that take years are made in some points of the earth to succeed in the stabilization of processes that demand the intervention of several human generations, in the other side of the globe a few people decide the future of millions, driven by interests of political domain or economic power.

Then, the collective intelligence achievement is a condition *sine qua non* for the sustainability. We require passing from the "I" to the "we" (Leff, E., 1998).

## Collectivities Seeking for a New Attractor

From the previously mentioned it could be deduced that we won't have success while we are not intelligent at a collective level. This means to share, co-create (Laszlo, A., 2001) and learn how to learn in community (Castro-Laszlo, K, 2001), in order to advance in a chaotic and without apparent direction world (Prigogine, 1997).

All this demands a participative and informative democracy (Rada, A., 2001) and perception, more than analysis, information or data. And this requires the sketching of objectives beyond the temporary horizon of our lives which could be achieved by collectives with a high commitment toward the life and a total indifference for the consumption model present in the world.

The development of collectivities that could at least see their own future in the sustainability is one of the possible roads toward that new strange attractor that demands the domain of the responsibility of the human being, like the maximum energy and knowledge power entity over the planet Earth.

Working in order to form this kind of collectivities is a task for life, this is, is not a matter of projects of municipal administrations or leaders, it is neither question of eventual governments that are there just for a salary during a period. It is necessary to work hard, but with a total commitment that dedicates the life to it, which it is not an easy task.

## The Collective Intelligence for the Sustainability

But there would be a reward: if we are capable to reach the collective intelligence for the sustainability inside a community (completely necessary condition) it would be just the first step, but that would be the way.

Then it would follow the achievement of the understanding of complex phenomena that imply seeing all of us in the future, sharing the same planet.

From there one could take diverse ways, but the democracy should, like human experience, stop playing the mediocre role of being interpreted as the process of choosing a government, and start being the process of dialoguing between the people, of learning together to guide those who represent us: again, the governance (Carrier, M. 2002).

Nevertheless, we could not advance toward that new attractor (that seems to be that of the planetary sustainability) unless we have a high level of commitment and understanding of the risks contained in the decision taking that we have now in the planet. Then, the human understanding is the second requirement.

Finally, if we could reach a collective understanding of nature events and processes, which are beyond the knowledge, we would have the opportunity and just the opportunity, of reaching a wisdom that will redirect us toward that new attractor of the Sustainability.

## The Experiences in the South of Coahuila, Mexico

In Saltillo, capital of Coahuila, we have initiated in 2003 (Teissier, H. 2005) a process like the previously mentioned, that in 2006 has important advances.

In 2005, it achieved the level of the community pushing up the construction of the Residual Water Treatment Plant for the City, a project that had been stopped for economic and political interests, for more than ten years.

We learned a lot as a group, but we mainly have begun to create a Collective Intelligence around hydrological resources sustainability processes in the region, a strategic matter for the development of the life, because this is a region placed in a semiarid zone, located in the southeast end of the Great Chihuahuense Desert, near the northeast border of Mexico.

In 2004, during the planning process of the Waste Water Treatment Plant, near 2500 families participated through a civic consultation, which contributed with data for the final decision taken by the town hall, in an unprecedented case in Mexico, related to the natural resources sustainable use.

Now, with this experience three more committees have been formed around the situation of water.

One of them is the Civic Committee to support the project "Basins and Cities II", that is directed by PROFAUNA, A.C., a NGO responsible of supervising the processes of conservation at the forest ecosystem of Zapaliname Mountains. A 62,000 acres zone.

This protected ecological zone, to which 70% of the aquifer recharge in the Saltillo Valley has been attributed, has a primordial importance for the sustainable future in the region. The project is executed in coordination with the Mexican Fund for the Nature Conservation, member of the IUNC, who contributes with 50% of the expenses of the Program of Maintenance and Conservation of the Zapalinamé Natural Protected Area (ZNPA).

The interesting thing is that the other 50% of the expenses is formed by more than 13000 families that contribute, in an unprecedented example at international level, donating an average of \$3 (three) Mexican pesos each, every month, through the payment of their water services receipt, for the conservation of the ZNPA.

This project was selected and occupied a place between the 20 better projects of civic administration of water in the world, a competition presented by IUNC during the IV World Water Forum, in Mexico City, in March 2006.

There are some other working committees, but the fact is that the collective intelligence, as we can see with citizens participating around complex sustainability problems, is working and it begins to have results.

All these projects, as well as the invitations to participate in new ecological and citizen committees of several sectors, indicate that we are advancing, perhaps slow but in a certain way.

We are conscious that not everything is done. However, we wanted to share our experiences with all of you, friends of the ISSS, at this 50<sup>th</sup> International Conference.

## Conclusion

The development of collective intelligence for the sustainability represents a gigantic task for humanity, we know it: going from the individual to the collective; from the regional to the global and from the representative to the informational and participative democracy. All of this is a challenge.

We would be talking about a total change of paradigms that our complexity can achieve without any doubt.

However, there is no other way. It is necessary to change our attractor: from the consumerism to the sustainability. There is no election. Probably it will be very difficult; however, there is still hope that this can be achieved.

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