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"Hyper citizenship" and the Evolution of a Global Identity

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Abstract

The idea of the paper moves from the consideration of autonomous agents and global flows eventually converging by means of autopoietic systems.
This work reframes the topic of the reconfiguration in the evolving social scenarios within Pitasi's concept of HYPERCITIZENSHIP, sketched out by designing a muldimensional and multipolar convergence among different kinds of citizenship.
With its four conceptual dimensions, Hypercitizenship, features the strategic attitude of those areas in which capitalism is turning into turbogenetic capitalism. Its main features are the following: Cosmopolitan, scientific, societarian and entrepreneurial.
The Hypercitizenship concept is focused on the fact that communication about key challenges of our times is increasingly meaning communication and public understanding of science and technology for governance and policymaking on a global, glocal and cosmopolitan scale.
From this point of view, law becomes one of the *à la carte* products to be bought by browsing a global "catalogue" (Mundus) surfing on a technological global platform (Globus) of which the internet is the best metaphor and which can be seen as the most important platform for convergence developments and as a driver of several, key, changes. This new media platform is cosmopolitan and glocal while the mass media often still fall into the methodological nationalism trap. Indeed, the emerging scenarios are more and more shaped by supranational (UN, EU, NAFTA) or multinational (Standard & Poor's, Moody's…) entities and by new localisms which cannot survive outside a global network.
Thus, the emerging *glocality* is witnessing that the "national state" citizenship is too big -bureaucratically speaking-, but too small -in competitive terms-, to be strategic in the merging scenarios.
Hence, the importance of a new conception of citizenship in the glocal age is rising, which

we refer to as “Hypercitizenship”.

Keywords: *Cosmopolitism, science, entrepreneurship, social autonomies, systemic regulation, complexity*

1. Hypercitizenship and the Globalization of Law

This paper is essentially theoretical as it is aimed at shaping the theoretical foundations for further fieldworks or “empirical” and applied researches.

It provides an overview of the most important and recent international references about the systemic and evolutionary bifurcation (Laszlo, 2008) that humankind is facing. The two alternatives of the bifurcation are the following. On one hand the choice is the Singularity RINGs (Kurzweil, 2005; Garreau, 2005); also known as the Heideggerian *Gegnet* (Schuermann, 1995) of a strategic, high speed convergence among robotics, informatics (synonym of digitalization) nanotechnologies and genetics. This condition would reshape human life in terms of life quality styles and standards, especially regarding health and environment matters. The alternative option would be a Neofeudal Scenario (NS) supported by those whose Industrial Model failed and the only way to save humankind and its environment would be a kind of return to a medieval life style inspired by slowness and austerity (Giner, 2010).

Our work also aims at describing a potential paradigm shift inside the systemic approach in order to reframe the conceptual map of a global change. This description can be done by means of a systemic epistemology of the sociology of law and its impact on creating laws which might facilitate and accelerate the technological convergence reshaping a new idea of citizenship, properly Hypercitizenship.

To this purpose, two elements will be analysed. The first one is the allocative function of legal systems (Luhmann, 1990a) in which a stronger and stronger digitalized Global Platform all over the planet attract/reject different capitals according to their procedures to shape norms and laws. This function of the legal systems is pivotal in our times. The second factor to be considered is the topic of communication and media policy in the era of the Internet and digitization within the concept of Hypercitizenship.

We sketched out a multidimensional convergence among different kinds of citizenship, namely: cosmopolitan (Beck, 2005), scientific (Nowotny, 2008), societarian (Donati, 1993) and entrepreneurial. The latter feature derives form a reinterpretation of Audretsch’s *entrepreneurial society* (Audretsch, 2009) according to the idea of an entrepreneurial *citizenship*.

The Hypercitizenship concept is focused on the challenges faced by communication and media policy due to an increasing digitization, as well as to the fact that communication about key challenges of our times necessarily means communication and understanding of science and technology for governance and policymaking. From this point of view, law becomes one of the *à la carte* products which can be bought by browsing a global "catalogue" (we call *Mundus*) surfing on a technological global platform (we call *Globus*) of which the Internet is the best metaphor and which can be seen as the most important platform for convergence

developments and as a driver of numerous, key, changes. This new media platform is intrinsically cosmopolitan and *glocal*, while the mass media often still fall into the methodological nationalism trap (Beck, 2005).

The most "*artificial and positive type of law*" - i.e. with no natural roots (Ubertazzi, 2007) is Intellectual property law (IPL). This paper deals with the new organizational shapes of the market of laws and rights, emerging from digitalization and globalization, at the crossroads between the IPL policies and the key challenges of scientific - technological convergent revolutions in the fields of genetics, robotics, informatics and nanotechnologies.

The emergent convergence/singularity of endotechnologies (Nowotny, 2008) represents the most radically evolution of the singularity generated by the convergence of robotics, informatics, nanotechnologies and genetics (RINGs convergence/singularity). Such a convergence is reshaping the social, economic and scientific patterns and variables of the public understanding of how science and technology are making everything evolve around us. Thus, to focus mainly on the key aspects of social life which directly cope with the ultimate frontiers of human evolution, wealth and health.

From this point of view, this theoretical essay deals with the differentiation of the legal systems which are interconnected on a global scale (Globus), to which every user can access, for example, online. However, these legal systems do not represent a unique, homogeneous set inspired by a "universal" vision of law as it used to be imposed by some attempts to found law on theology or on a universal concept of rationality as evoked by the *enlightment* spirit. Nowadays, legal systems provide a huge variety of norms and procedures on a global scale shaping a planetary catalogue (Mundus) of norms, concepts, procedures, rules among which a skilled user can easily choose for example in terms of business delocalization/relocalization. Thus, the platforms (Globus) and the catalogue (Mundus) of rights viable for shopping (Galgano, 2005) on a global scale represent the chance of legal systems to reveal their most profound identity: they are not (and probably they have never been) based on theological or rational universality, rather they derive from the glocal power of will (Irti, 2004). From this perspective, the Mundus of rights shapes the competition or cooperation among legal systems on the Globus about attracting the key and most strategic capitals (intellectual, financial, human etc.) to empower and evolve at the highest speed the RING Singularity.

That is the reason why the state of the current scientific-technological is extremely differentiated among the various geopolitical and legal areas of our planet. It might seem simplistically but the viability of the Ring Singularity increases according to the specific actractivity of a legal system. Brazil, China, India and Russia (the so called BRIC) are not growing at a higher speed than USA or the UE because they are reproducing our economic model to reach our same wealth level, they are reconfiguring the rules of the business - enterprise- science- technology game, by drawing new theoretical and juridical distinctions and new radical operations.

Hence, the link between RING Singularity (RS) and Legal System Actractivity (LSA) can, and somehow must be reframed though the paradigm shifts form the "human condition" (HC) to the "posthuman" one (PHC) and then to the "hyperhuman" one (HHC), as the convergent technologies dramatically and powerfully reshape the ideas of humanity and mankind.

What does it mean to be human? When did mankind began to be human? And when did

mankind quit being human? In evolutionary terms we might consider we became human when we began to manipulate symbols by using our neo-cortex and then we began to model and adapt the world our way more than adapting to it. But when did it happen? When we were Cro-Magnon, Neanderthal or at the Homo sapiens stage? Or maybe we were naturally human before we learned to "create our own world", i.e. before we began to use fire? Because since we started to use fire (Goudsblom, 1994) we began an artificialisation process (clothes to protect ourselves from the cold weather, glasses to correct sight problems up to the most advanced cardio-surgery technologies) which represents a post humanization of the human toward the "cyborg" so that human life can last longer and under better quality conditions by replacing "broken parts" with new, efficient, artificial ones. Is a man with a pacemaker human or is he an evolutionary stage of the cyborg?

If we take a look at the Bible the perspective might sound different at a first glance but in practice is not. While the Neanderthal was probably "less human" than the homo sapiens but Adam and Eve were some way "extra-human" or "superhuman" as they had not the key weakness which feature what commonsense nowadays would call HC, for Adam and Eve becoming human was a kind of downsizing and according to the Bible they became human because of the original sin.

Both in an evolutionary Darwinian perspective and in a Christian one, at a certain point we became human and this implied to learn, to create and to increase knowledge to model the world according to our needs/hopes/fears and so on. Either emerging from the cavern or falling from the Lost Eden, mankind is featured by an artificialisation process towards the Cyborg, the PHC, if we consider human history (Goudsblom, 1982) but then, all in a sudden, something changed and the HHC began to take shape exactly when the RING Singularity started to evolve faster and faster, tendentially since the end of WWI.

But what is HHC featured by? Probably, the two most brilliant analysis of the HHC are provided by Helga Nowotny in her superb *Insatiable Curiosity* (Nowotny, 2008) which is an excellent work in the sociology of science and by John Harris excellent book *Enhancing Evolution* (Harris, 2007), author who is a thought leader of the British sociology of Law at the Law School of the University of Manchester. Both books cope with two aspects: a. the technological convergence named RING Singularity and b. the way it will reshape social organizations and its rules. Nowotny provides the key concept of scientific citizenship which we consider pivotal to link Globus and Mundus, as the scientific citizen is the user both of the G platform and of the M catalogue by selecting those rights which fit more with his/her wealth, health and well-being needs.

Due to the convergence between the RING Singularity and the most attractive legal systems on the planet our species seem to have already had an internal differentiation among:

i) Humans
ii) Posthumans or Cyborgs
iii) Hyperhumans.

This is the key challenge about diversity management nowadays. Gender diversity or racial diversity seem (and probably are) rather irrelevant in comparison.

It is not hard to say that "humans" no longer exist since, at least we might correct our sight problems by using spectacles

We all are already cyborgs or posthumans either because we are partially artificial and maybe in our body we have cyborg installations such as pacemakers or because we share the same memetic scenario in which we are perfectly aware we might host these installations inside us. Our brain frame is always posthuman and much more posthuman than what our body might be in practice in the present time. We all are conceptually posthuman.

But if "humans" died at an average age of 30, posthumans can live about 75/85 years as an average with some exception up to 100/105. The HHC is radically different, as clearly described by Harris (Id., 2007) a HH person can live about 120/130 years as an average if (s) he belong to the first HHC generation (born around 2006) or about 740 years as an average (yes, it is not a type, seven hundred and forty years) if (is) he belongs to the second HH generation born around 2015-2020). What is all the fuss about this paradigm shift by reshaping the "person" through the link between RS and LSA?

Essentially, the first HH generation represents the stem cell re-entry in the health risk prevention and reduction but some way reinstalling "baby cells" in a sick body its own stem cells (deriving from its own umbilical cord perfectly secured by a genetic bank). Thus, the installation is "natural" and "clean", not artificial but the installation process itself remains a typical post human working style.

A sort of triple helix of complexity empowerment- high speedy evolution - match finding ease between RS and LSA is the key of the way the two species (PH and HH) are distributing themselves through the planet and is also the key of the human re-entry clearly theorized and wonderfully explained by Archer (Archer, 2006) and Donati (Donati 1987, 1991, 1993, 2008a, 2008b, 2009, 2010a, 2010b).

Complexity, Speed and Ease are the "stars" of the radical reconfiguration process reshaping social life in its broadest and deepest meaning.

From this point of view, nine turboconditions seem pivotal to assess the LSA for the RS.

2. A further step

The gap between the two HH generations brilliantly describes how radical technological innovation powerfully reconfigures individual, personal *Lebenslauf* and systemic organization. The HH shift also involves HH agriculture (the GMOs, for example) and the HH energy agenda. This HH shift dramatically provokes strong public opinion debates and their "consequences" easily witness that emotional, incompetent reactions and attitudes can generate a public misunderstanding of science, technology and their socio-economic impacts.

That is why scientific citizenship is emerging faster and faster to solve the "incompetence" problem, the scientific citizenship is reconfiguring itself and is emerging as a shape of the societarian one (Donati, 1993) inspired by an autonomous, self-organizing "spirit" and mood of the most competent and skilled knowledge based elites educated according to the most self-reflexive relational responsible freedom. These elites will be the wide horizon leaders serving as "drivers" of the new cycles and trends: whose trajectories follow the S=R/W formula where the supply/demand match finding between RS and LSA is in real time in the Time Zero of Desire (TZD) scenarios.

To understand these new trajectories clearly described by Harris and Nowotny it is

adequate to go through Nowotny's work which perfectly shows the paradigm shift from the post human to the hyperhuman scenarios of the RING Singularity in the TZD Age. In Nowotny's semantics, The RING Singularity is labeled as "convergent technologies" which are endotechnologies. The Ring Singularity/Convergent Endotechnologies shape the Hyperhuman World while Exotechnologies are the most evident output of the Posthuman, "Cyborg" scenarios.

Nowotny clearly states that: "*The convergent technologies based on successful connections among the biological, informational, nano, and cognitive sciences open up a broad field in which brain and matter, body and environment can interact in a controlled fashion. These and other transformations that spring from science and technology touch on humanity's self-understanding as much as they change our social life together"* (Nowotny, 2008: 12-13).

Nowotny's key contribution evolves into the concept of scientific citizenship which features the *knowledge based society, as a matter of fact*, she affirms,*"a knowledge based society also increase its production of epistemic things, various kinds of abstract objects, and technical artifacts that are subject to the same rules. The democratization of scientific expertise is also merely the expansion of principles of governance that have served the Western liberal democracies well. Today, science and technology are no longer viewed with awe but are part of everyday life. Mediated by the educational system and qualifications and certificates people acquire, they determine people's chances of upward social mobility, their working world, and the course of their biographies. It is thus logical to extend the concept of citizenship to science and technology. «Scientific citizenship» comprises right and duties and asks about both the functions that expanded concept of citizenship could fulfill in social integration and also the duties that arise from it for citizens as well as for political institutions and administrations"* (Id.: 23-24).

Nowotny suggests that *"there is broad agreement that more money should be invested in research (that is, that science and technology must continue to expand). This is to be achieved by putting the unexpected and new that comes out of the laboratory into the widest possible variety of contexts of applications to produce in them new knowledge that in turn brings forth new abilities and continues to spread in society"* (Id.:83,84).

Moreover: *"Today, the entire knowledge of humankind and its impressive technological capacities is oriented toward a future that does not so much promise a new beginning as further intensification and dynamic continuation of what has already been achieved. Science and technology cross the threshold between the present unhindered, for what appears possible in the laboratory today can already be in the market tomorrow or the day after"* (Id.:107).

What's next, then? *"The future we are now face relies on innovation under conditions of uncertainty. This cannot be equated with lack of knowledge – quite the contrary. Uncertainty arises from the surfeit of knowledge, leading to too many alternatives, too many possible ramifications and consequences, to be easily judged"* (Id.:116).

In practice *"exotechnologies aim at the expansion of possibilities of controlling the environment. They have enabled people to travel greater differences in less time and to settle the space they found more densely and efficiently. The processing of found and extracted materials finally enable the mass production of artifacts, the preservation of foodstuffs, and*

the erection of infrastructures that in turn made it possible to live comfortably in otherwise inclement climate zones. In contrast, the regime of endotechnologies – bio-, nano-, info-, and other converging technologies – changes the dimensions and scope of action of the scientific objects. They form mostly invisible yet visualizable infrastructures that can penetrate into the smallest dimensions of matter or living organisms" (Id.:132-133). Thus,*"science and technology cross the boundary between the present and the future with a certain ease and thereby move the future closer the present. Nonetheless the future seems fragile. The loss of temporal distance blurs the difference between what is technologically possible and what is already present in the laboratory, between imagination and reality, which is often a virtual reality. Having lost all utopias, the future presents itself as a sketch of technological visions that block out the social knowledge that is needed to live in a scientific-technological world – and to feel well in it"* (Id.:155-156).

2. Encompassing the Complexity of Hypercitizenship

We are currently heading towards wider and faster scenarios. This kind of evolution we are getting through is also due to decrease of useless infrastructures and unproductive HRs thanks to the implementation of public reforms.

These scenarios will make cultural and trade exchanges easier and quicker. Furthermore, they will be safer and more stable, thus to eliminate any "interferences" to global flows of human, intellectual and economic capitals on a worldwide scale, since socio-economic challenges of our times cannot be managed on a national or even local level.

Higher levels of speed and safety will then characterize the new scenarios as a new jumbo jet in comparison to older plane models which are more instable and slow.

This stable "speed" mostly depends on the development and broadcasting of new and standardized platforms, procedures and technologies (currency, languages, operative systems) that can create transparency (i.e. through video recordings, metal detectors, etc.).

Pitasi personally defines this stable and fast scenario the "Time Zero of Desire" (TZD) because it represents the kind of scenario in which supply and demand (of material, relational and economic goods) can easily cross at the same high speed of emails or sms exchange. TZD is then perceived as a high speed scenario which is stable in crossing supply and demand at the lowest economic, organizational and contractual costs.

The setting showed above is developing according to an increasing number of turbo-economies (from India to Botswana) more and more global and transparent in nature. Those economies put in evidence some areas of the world scene that are generally not strategic and in which we can often see provincial and narrow minded attitudes. The latter are similar to the behaviour of some ancient feudal lords who used to threaten and scare their own subjects by means of fear and ignorance. Thus, they would prevent their people from experiencing the real society, by keeping them inside the feud, afraid of facing some alleged external dangers from which the local power could not protect its subject anyways.

TZD is the ultimate scenario to implement turbo-condition, described as follows:

Turbocondition 1: To Reset the reptilian brain

We assume as true the theory of the evolution through interconnected balances which are

based on the cooperation of three brains belonging to any human being: reptilian, limbic and neocortex. Besides, we keep in mind the man's neocortex power as well as the social function of the limbic system. Therefore, the actual issue is whether the way out of the Palaeolithic (i.e. a condition of radical bound to roots and homeland which is typical of nowadays "cave men") would also mean to reset the obsolete and harmful reptilian brain. This process leads to show the religions and philosophies adopted according to their functional role which is made up of adaptive methods and behavioural pragmatics.

Turbocondition 2: Evolving the 7 platforms of the global development

Resetting the reptilian brain necessarily implies erasing the clashing factors generated from this pattern brain, thus to be able to develop the 7 platforms of the global development:

1) Currency and rating standards;
2) Digital satellite telecommunications;
3) Biotechnologies;
4) Extra-planetary technologies;
5) Technical-linguistic platforms;
6) Contents catalogue;
7) Evolutionary capitalism.

This striving for development represents a strategic function in the policymaking agenda.

Turbocondition 3: To increase the moral and ethics significance of the economic development avoiding financial bubbles

The increasing trend to the institutionalization of "neo- rights" is not often adequately followed by a feasibility analysis in order to apply it. Besides, other elements are lacking, such as the creation of new professional profiles, procedures and structure that can support the process of implementation and that can lead to those speculative bubbles which are attributable to political rather than economic behaviours .

Contemporary politics should avoid to let an empty rhetoric of some sort of newly rights[1] create two kinds of negative conditions:

1. Illusions unheard consequently provoking social conflicts;
2. Obstacles to on-going development processes

This can be obtained exclusively regaining the ethic value of development, trying to implement new markets and pushing the progress through Kuhnian evolutions, without any interruption of the productive cycle.

Turbocondition 4: To place the political sphere among economic businesses of the service sector. Politics has always been supported by trade exchanges and not just because of a sort of influence peddling.

Politicians do marketing, they exploit the "hic et nunc" philosophy and go along with structures and entities that can provide consent in the short term.

The political system sets up a sort of market which is actually highly inflated and with a scarce added value, and which produces plenty of financial and propagandist bubbles every time that some legislature report is required. Therefore, other institutions and systems apart from the market do exist, and behave like an economic reality since they promote business speed, customer satisfaction, process innovation, even though they are based on an inflation

and implosive logic, with high costs and minimum value added. Politics belong to this kind of systems.

Turbocondition 5: To give policymaking opportunities to scientists, neo humanists and top brainworkers.

Giving political opportunities to eclectic and scientifically qualified intellectual elites would lead the socio-economic development of the knowledge society. Thus, to trigger a virtuous circle among power, knowledge and capital and ensuring a real sustainable development.

Notwithstanding the fact that the future evolution will be extremely "technocratic", one should clarify whether this technocracy will be managed by unskilled professionals or experts. The latter acting in Turbocondition as "top brainworkers", that is to say people that concretely work for the development. Their contribution is contemporary intellectual according to the meaning of "neo humanists", i.e. scholars of human sciences through scientific premises which better enhance a radical innovation instead of an incremental one. Therefore, the above mentioned virtuous cycle can be triggered only if we provide this kind of possibility to people able to think about the opportunities offered by modern scientific paradigms by following different patterns.

Turbocondition 6: To stimulate the subsequent evolution of life on earth focusing on the analysis of the neocortical morphogenesis

Men always interact with their technological tools and the latter can even manipulate our ability to manage them and our lives. This kind of circular dynamic influences should lead to reassess our paradigms about the concept of person and of relational system tout court. According to this new paradigm technical- human like we can make an attempt to understand how the paleocortality and the neocortality are affected by the technical supports and their evolutions.

Perhaps one day we could affect the cortical evolution by means of technology, or even find out that this human corticality has always made some evolutionary leaps thanks to technology. Thus, our way to approach the study of history could change. Our futures also depends simply on a new look to daily things.

Turbocondition 7: To encourage continuous Kuhninan evolutions and inventions with a high value added.

It is time to encourage continuous Kuhninan evolutions and inventions with a high value added, thus to set grounds for a social system in which, if S=R/W, economic cycles follow one after the other with delayed positive timing and shorter depression times in each cycle. V represents speed, R stands for a model of innovation information broadcast according to Everett Rogers' thought and W refers to Williamson's models. According to Rogers, at an earlier stage innovation is kept by a narrow number of innovators and from them it moves towards the first innovators (connectors, experts and skilled sellers), then it goes to the first majority and finally it reaches the last group of users, i.e the "marginal" ones. Besides, Williamson states that every organization has to face three types of costs in order to survive:

- Contractual costs;
- Economic costs;
- Organizational costs.

The present turbocondition implies that the ability to spread innovation gets faster as Williamson's costs decrease: it is then necessary to keep costs as low as possible in order to make innovation broadcast faster. Shooting down costs determines new possibilities and also allows other marginal categories to enjoy the use of an innovation without being cut off.

Turbocondition 8: To consider the surplus of variety and the hypercomplexity, a sign of wealth and a big opportunity also in the case of the increasing variety of artificial biodiversities

An eventual collision among natural biodiversity evolutionary systems and those characterized by artificial biodiversity could lead to hybridization. This is actually already happening (one can think about the fertility control through the birth control pill or to the cure of some decease by means of some genetic alterations).

In fact, the biological turning point offers plenty of opportunities for the life quality on earth, as well as many social issues and new communication needs. That is why this phenomenon is nowadays perceived with great and often unjustified fear. According to Luhmann's, then, "we do not live in best possible world but in a world full of better possibilities", of which we should take advantage.

Turbocondition 9: To enhance competition capitalism on the short and middle term dimension through tactic models such as lean thinking and the kaizen practice

The lean thinking is addressed to the optimization and to increasing the results performance and has always been opposing against the bureaucratic thought which is based on the control and validation of the procedure.

Striking out wastes can be possible if we pursue and implement 5 principles:

1) To individuate the value;
2) To individuate the flow;
3) To let the flow made up of creating activities run;
4) To make the flow being pulled by the costumer, allowing him to purchase the ability to plan and implement only what he wants in the moment in which he wants it (just in time);
5) To look Perfection (Kaizen) in the sense of "continuous improvement".

Rather than an instrument, the lean thinking is a way of thinking which is necessary to activate the S=R/W function.

The nine turboconditions explained above are necessary, even though not always sufficient to carry out a global scenario. The latter being stable, fast and aware that in a free, open, fast and tolerant world a rapid economic development is a guarantee for a human, personal and social dignity.

The trick according to which a "poor but happy" world can still exist is typical of nowadays cavemen that we can easily leave behind trying to light a fire with some wooden sticks while we are sipping our drink, reading a good book and listening to some nice music on a jet carrying us where we wish to go.

These turboconditions facilitate the increasing of the evolutionary speed related to an increase of variety. It might sound paradoxical that increase of variety and increase of speed might walk one beside the other but it is not so as I am going to show in the following part.

4. Speed as a core asset for a Hyperhuman evolution

The power of complexity and variety meant as a key wealth evolution system is described by the systemic approach by comparing Laszlo's whole/part paradigm and Luhmann's system /environment one to observe the energy-ecology link from an evolutionary perspective.

The paradigm shift from whole/part to system/environment is pivotal within system theory because it turns the concept of future upside down. As a matter of fact, the former paradigm still copes with the problem of describing/foreseeing the future and with the matter of predictability and its variables while the latter-which is the core of this paper considers the future as conceptual, abstract model which can be invented and then self-reproduced but not foreseen/predicted.

In the age of simulation and modelling patterns, the future becomes an autopoietic concept which evolves self referentially though all the viable networks in which it can reproduce itself. That is why in Luhmann's words: "*For a theory of autopoietic systems, only communication is a serious candidate for the position of the elementary units of the basic self-referential process of social systems*" (Luhmann, 1990b: 6).

The evolutionary autopoiesis depending on the "reproducing by differentiating" process is a key idea to focus on in order to understand how the paradigm shift from the whole/part variant to the system/environment one has changed the kind of mathematics to be adopted from predicting to modelling, some way from abstract to applied mathematics (Lakoff G., Nunez R., 2005), with the aim to frame the most intangible but nevertheless high impact factors of the social systems (Pitasi, 2010) in the conceptualization of time in general and future in particular.

An exemplary item of intangible but high impact factors of the autopoietic process are the transactional costs especially the organizational ones according to Williamson 's theory related to Roger's cycle for the diffusion of innovations in a social system.

The Rogers's Cycle (R) Speed (S) is proportionally inverted to the Williamson's costs (W) thus S= R/W.

The purpose of this last part is to describe the energy management matter within a systemic approach trying to empower an embodied mathematics viable to fuel the autopoiesis process to increase the R's viability by decreasing W.

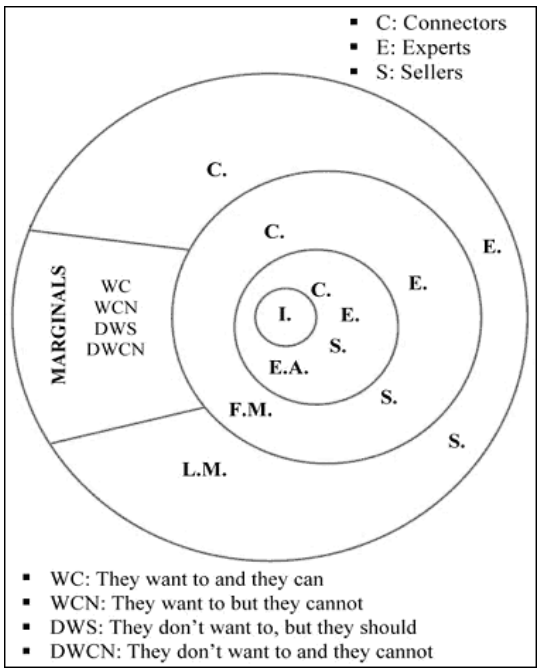

Figure 1: Rogers model updated (Pitasi, 2007)

The key point is to distinguish the differences which can really make the difference to empower the energy system and to go beyond the limits of the pro-oil/contra oil, pro-nuclear/contra nuclear mass media debate. As widely argued in some previous works (Pitasi, 2010) there are three key features which can increase R's viability:

complexity, speed, ease. These three features allow R to generate as a spinoff of a knowledge wealth flow (KWF) of the energy sector which would be radically reconfigured by the KWF itself:

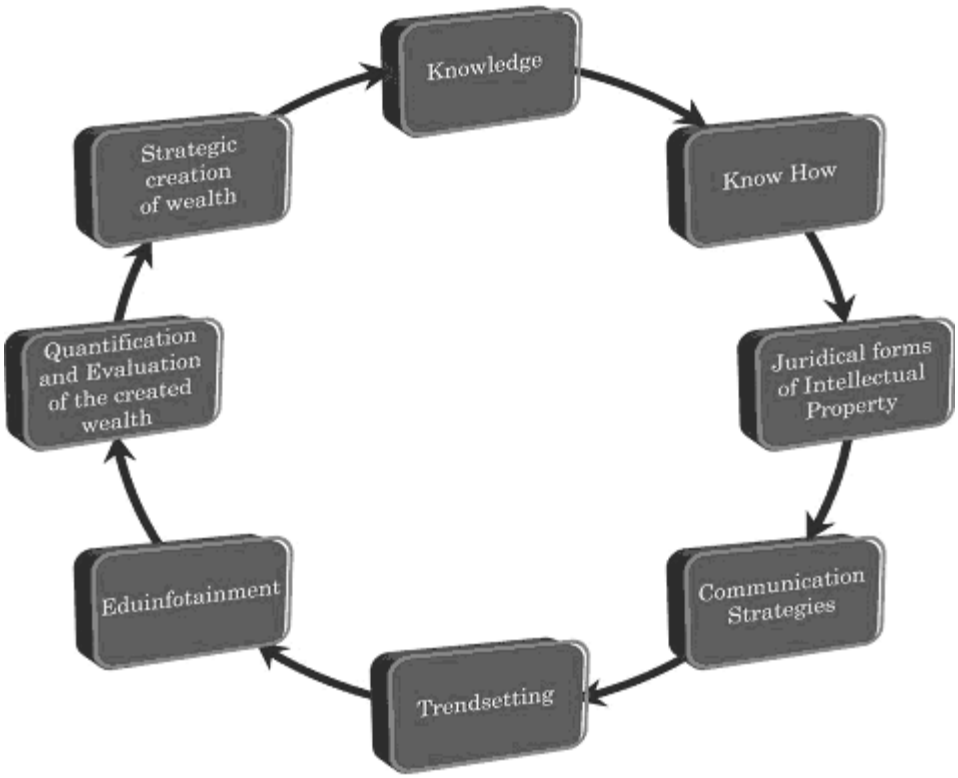

Figure 2: Knowledge and Wealth Flow (Pitasi, 2007)

Let's describe the three key features in brief:

a. Complex

Linear, causal models do not work anymore to analyse global changes. The challenges of complexity originally described by Nicolis and Prigogine begin to focus on what kind of mathematics is viable to deal with exceeding varieties and on how much knowledge intensive and information rich a strategic benchmark for energy management might and should be.

b. High Speed

By evolving the S= R/W formula thus by describing the different energy Roger's cycles through the downsizing of Williamson's costs this paragraph will describe how a strategic and effective strategy for energy management would increase socio-economic development, business speed and radical innovation diffusion. Thus it is not difficult to state and demonstrate the loosing mood of those ideologies which link sustainability to growth decreasing and /or a "back to the pre-industrial world economy".

c. Ease

An effective energy management problem solving requires easy and user friendly, almost idiot proof, solutions.

The impact of design (for example about packaging) on recycling policies is a very clear case.

One further example is represented by high concept and *eduinfotainment* novels such as Crichton's State of Fear through with education, information and entertainment arte mixed and balanced to facilitate- thus the public understanding of science about the key challenges of our times concerning the energy-ecology link.

5. Implementing a Hyperhuman Society[1]

As we approach the debate upon the challenges of global society, the concept of *Hypercitizenship* suddenly impacts on our perception of what Systemic science could mean in terms of human (or even hyperhuman) and social evolution. In the background described in paragraph I the image of post human horizons is envisaged, also suggesting the resort to human artificial prostheses.

Thus, the "avant-garde" of such evolutionary society has no place left for what we call *losers on the battlefield of history* (Pitasi, 2011: 20) since the latter are encountering the "rebellion" of new emerging knowledge-based elites, also defined as the *Elites of the future and wide horizon leaders* (Id.: 21).

New associations of concepts emerge, evoking similarities in terms of conventions and inventions of lean thinking and flows, and of variety and strategy in order to define an innovative and de-structured way to think about the creation of a performing hyperhuman society.

New hypothesis around possible bio-economic scenarios imply the need to cope with multiple inputs involving diverse domains in which the idea of a turbo capitalism inevitably impact on biology, medicine, engineering and social science. That what is meant to be described in this paper, in which we linger on the concept of a *Knowledge – based society* and all the implications that stemming from it. Hence, the need to profile *Elites of the future and wide horizon leaders* becomes unavoidable and necessary for the purpose of the perpetration of mankind itself and of an adequate evolutionary society.

According to Luhmann's view (Luhmann 1990b), such Global Elites are supposed to belong to a world considered to be full of the best opportunities rather than the best of all possible worlds. These condition would thus lead to compel a more synergic and effective linkage between science and humanity.

The issue of information asymmetries must be recalled as well, in the view of the conception of a system theory, since "*only a society committed to self-destruction can choose to slow down and decline, invoking the symbolic rhetoric of a localized, community- based identity that harks back to the past and which may even go as far as to condemn pro-active ambition, speed, and self- furthering business activities*" (Pitasi, 2011: 31). To avoid this scenario it is necessary to develop adequate strategies and stratagems due to the fact that "*Strategy is the art of pushing forward even when there is no immediate pressure to do so. It is no coincidence that strategy comes from the same root as "strateγema", which gave us the word stratagem, meaning an intelligent plan of action thought up by a military commander. To survive we must have a strategy. Strategy has accompanied human thought from the beginning of humankind*" (Pitasi, 2011: 53)

To this aim, the first element to consider in the process is variety, for it reveals to be

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indispensable in the evolutionary stages that progress through selection and subsequent stabilization in a permanently circular dynamic

Since we primarily focus on organizational complexity (legal, economic, etc.) of social systems and the system of world society, the chosen approach cannot be but interdisciplinary and open to consolidation from biological, mathematical and cybernetic as well as neuro-scientific variations of the systems theory.

Therefore, the leading idea behind this work is the development of an interdisciplinary systems theory (derived from biological, cybernetic, neuro-scientific, economic, epistemological sources, etc.) in which multi-paradigmatic sociological knowledge acts as a facilitator for the connection, systematization and recombination of these evolutionary disciplines. Thus, in order to take into account and embed the multidimensional complexity of society through a reinterpretation of the relation between systems theory and complexity.

Systems theory, with its complex and embodied mathematics, appears to be an adequate conceptual model, mostly because of some structural characteristics such as its evolutionary and adaptive "plasticity". Furthermore, regarding systems theory, such an approach can provide economic theory with a coldly epistemological perspective, devoid of ideologies which can be placed "*somewhere between Luhmann's autopoiesis and Laszlo's interdependence along the functional directrix of diversity/selectivity /stabilization*" (Pitasi, 2011: 95).

We would like to stress possible convergences by examining the systemic relationship between sociology and economics in a synergistic way. In fact, what he thinks has been lacking so far is an epistemic, theoretical and methodological meeting that could lead to a strategic consensual domain between the two. This observation can put in evidence an example of how knowledge of complexity may increase humankind's possibilities of evolutionary choice.

Additionally, individuals should learn to choose among different models of behaviour, attitude and opinion according to their own specific characteristics and in relation to their age and stage of development. Indeed, from an evolutionary point of view, this attitude will make individuals able to pursuit and follow a path of identification, thus leading them necessarily develop a strong personal identity. In non-deterministic and probabilistic terms, they will finally adapt self-referentially by reworking the environmental stimuli according to their own codes and programs, as well as to their own specific life plans.

The ultimate question to be answered is whether and in which ways can individuals analyse the movement of global capitals - especially intangible ones – according to the relationship between existing legal systems and business systems of technological innovation, while hypothesizing evolutionary strategies for economy and knowledge society. Thus, possible answers suggested in the book stem from the formulation of a system theory of global society.

The work appears to be focused on the individual considered as an autonomous agent, according to outcoming strategies necessary to enrich the society leading to a hyperhuman future.

The final idea of a convergence of the human and the systemic in the memetic and re-configurating system of the hyper human world provides an innovative change of

perspective, by means of a systemic approach to accomplish a *bloomed knowledge*.
The message underneath seems then to be an invitation to strive through a holistic embedment, involving both notion and values, thus, pursuing the highest achievement in terms of power concerning human evolutionary possibilities.

6. Conclusive Remarks

The evolution of the variety/speed relationship in terms of S= R/W is a key challenge of our time and an adequate epistemological, theoretical methodological and technical toolkit to empower S is fundamental. Diversity Management might become a privileged tool to generate win/win variety/selection/stabilization processes by widening the observation horizons, increasing freedom of choice and implementing effective high speed decision making.
Form our theoretical perspective (Pitasi, 2010) it is pivotal that some key morphogenetic traits of capitalism emerge, in order to downsize other traits which might generate not only risky but also dangerous effects.
According to the brief overview presented in the previous pages, we can draw some conclusions, which will provide the basis for further observations and researches. Our remarks can be summarized as follows:
a) The emergence of the Hyperhyuman shift will probably create new organizational stages of capitalism radically reshaping health policies, food production and so on and this shift represents a potentially wonderful strength towards a more democratic diffusion of high added value knowledge though the most effective practices of the scientific citizenship lobbying.
b) A key weakness of this shift might be its implosion into the so called techno-nihilist capitalism (Magatti, 2009)
c) The "back to the cavern"/neofeudal solution is not viable at all. As a matter of fact, for example, the pre-industrial agriculture fed less than 50% of the world population composed of 700/800milion people and the average life length was about 35 years.
If we got "back to the past" many old problems of the past would return and a pre-industrial agriculture would feed again about 400 million people that is less than 1/16 of the world population. No viable future might look like our past.
Against all odds and against the rhetoric of the ecological threat, "progress" has evident side effects but it definitely works.
d) The scientific citizenship is more and more pivotal to provide democratization in the knowledge sharing process worldwide and it depends on the S= R/W of the relational networking emerging by societarian citizenship (Donati, 1993) patterns to let the huge variety of scientific information and legal procedures to use them adequately and fairly
e) The "fair use" of scientific citizenship in a relational, global network depends on the challenge of letting the scientific citizens become free and responsible persons (Cesareo; Vaccarini, 2006) to provide an adequate re-entry of the human (Donati, 2009).
From this perspective, sociology of law is pivotal to cope with challenge of linking scientific citizenship and societarian citizenship so that the Hyperhuman spin offs of the so called

Immortals (Harris, 2007.) might be framed within a relational and responsible legal theory focused on the re-entry of the human in that new shape of global policymaking we call Hypercitizenship.

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