

# HUMAN DEVELOPMENT, KNOWLEDGE SOCIETIES AND INSTITUTIONAL ADJUSTMENT\*

Desarrollo humano, sociedades  
del conocimiento y ajustes institucionales

Jairo J. Parada

**JAIRO J. PARADA**

PHD. PROFESSOR — DEPARTMENT OF ECONOMICS - UNIVERSIDAD DEL NORTE.

ADDRESS: UNIVERSIDAD DEL NORTE, KM 5, VÍA A PUERTO COLOMBIA

A.A.1569, BARRANQUILLA (COLOMBIA)

JPARADAC@UNINORTE.EDU.CO

\* A modified version of this paper was presented at the 50th Conference of the Western Social Sciences Association at the panel of the Association For Institutional Thought (AFIT), in Denver, Colorado, April 23-26, 2008.

## RESUMEN

Este ensayo ilustra cómo las “sociedades del conocimiento” están evolucionando ahora, y ofrecen nuevas oportunidades para el desarrollo humano que constituyen básicamente sólo posibilidades. Pero nada sucederá automáticamente como resultado de los mecanismos de mercado y la difusión normal de nuevas tecnologías. El mejoramiento del bien-estar humano de la población en los países en desarrollo demandará fuertes ajustes institucionales que deberán volver a dirigir nuestros esfuerzos hacia proyectos políticos más incluyentes, democráticos y menos inequitativos. Este propósito requiere mucho apalancamiento de la agencia individual y colectiva y de los gobiernos, y acciones reales en el mundo material, para volver una realidad estas posibilidades que surgen de las sociedades del conocimiento.

**PALABRAS CLAVE:** Sociedades del conocimiento, instituciones y desarrollo humano.

## ABSTRACT

*This paper illustrates how 'knowledge' societies are developing now, offering new opportunities in human development that are basically possibilities. But nothing will happen automatically as an outcome from market mechanisms and normal diffusion of new technologies. Improvement of the in population well-being the developing world will demand deep institutional adjustments that should redirect our efforts toward political projects more inclusive, democratic and less unequal. This purpose will require high leverage from individual, collective agencies and governments, and true actions on the real world in order to materialize these possibilities coming from knowledge societies.*

**KEYWORDS:** *Communication for social change, complexity science, complex systems, decentralized control and self-organizing processes.*

## INTRODUCTION

In order to explore the relationships between Human Development and Knowledge Societies, it is necessary to perform an initial critical exam of the concepts of Human Development and Knowledge Societies, their relationships, and systemic embeddedness within the current stage of capitalism we live in. In addition, it is also important to envision the possibilities of urgent institutional changes at global and national levels in order to transform the current situation.

I claim that these concepts have been overused and reduced to a common rhetoric jargon as it has happened with the concept of ‘globalization’. It is necessary to assess these concepts in their true dimensions in order to be able to exam the real possibilities that developing nations have when facing these new challenges. In doing so, it might be possible to suggest the required institutional adjustments to trigger new possibilities for these nations, including the new role that universities could play in this phase regarding the needs and challenges of this stage.

At the beginning of this paper I review the concepts of Human Development and the empirical evidence regarding the possibility of world wide convergence regarding the basic indicators used to measure Human Development from a critical standpoint. Second, I address the main issues concerned with the concept of Knowledge Societies from a Veblenian perspective and other approaches. Finally I concentrate on the need of institutional adjustments to deal with the on going process of analyzing the challenges that this process demand from universities. In the last section some conclusions are presented.

## THE NOTION OF HUMAN DEVELOPMENT

The concept of “Human development” (HD) attracts some attention due to the intense use of the concept during the last fifteen years. Indeed, this notion has replaced the traditional and

general concept of “Development” despite the on going accepted idea that development could not be reduced to economic growth and that it should include a multidimensional vision where social, political and environmental perspectives were clearly encompassed. The idea with the notion of HD was, according to Paul Streeten (1994, p. 232) to put the people at the center of the concept of development, after decades of simplistic and technocratic visions on development.

Streeten, an institutional and heterodox economist, underlined the importance of not separating ends from means, an issue that many times is forgotten in the current rhetorical orthodox approach in the search of fiscal equilibrium, low inflation rate without any concern for what the impacts of these policies and objectives mean in terms of human and social cost to people as these policy targets are achieved.

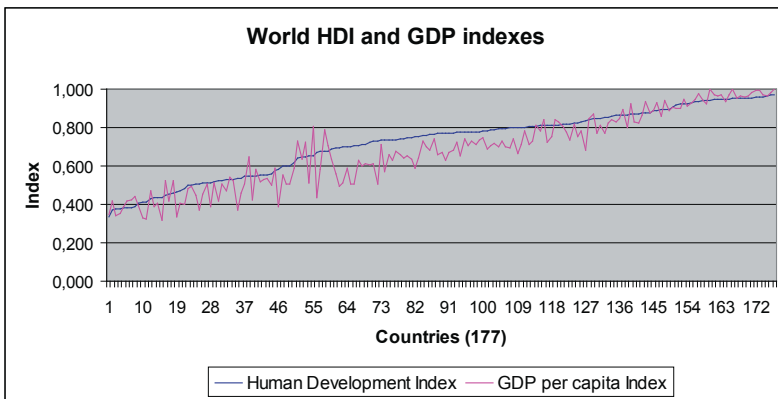
It was Mabub Ul Haq (1995) who proposed a systematic approach to the idea of HD and who elaborated the famous Human Development Index (HDI). In his own words,

The basic purpose of development is to enlarge people’s choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives<sup>1</sup>.

Every year the United Nations, through the Development Program, delivers a country ranking according to the HDI. The media pays attention to these results and to all sorts of different

<sup>1</sup> See <http://hdr.undp.org/en/humandev/>

indicators from different research centers suggesting alternative measures. Undoubtedly, the HD concept has helped to understand that development must combine economic growth, with health and education in order to become more integrated from the standpoint of quality of life of human beings. At the same time the HDI gave hope to developing nations: it was not necessary to be 'developed' as an industrialized nation in order to get higher levels of life expectancy and better education coverage (see figure 1).



**Figure 1:** Comparison of World Human Development Index and GDP per capita - 2007.

**Source:** Elaborated by the author from United Nations. Human Development. Report 2007, table 1, pp. 229-232.

This is the case of Argentina in 2007, which ranks in the 38<sup>th</sup> position in the HDI just below developed nations and some Caribbean islands and oil countries as Qatar. Indeed, the developed countries rank in the first thirty positions in the HD report for 2007-2008<sup>2</sup>. Many Latin American countries on the other hand, rank well below Argentina, going from the 70<sup>th</sup> position and higher, indicating that they have achieved just a 'medium' HD. But if we order all countries by GDP per capita (in purchasing power parity dollars) Argentina ranks in the 47<sup>th</sup> position, revealing a lower GDP per capita compared with the developed nations.

<sup>2</sup> See Human Development Indicators in <http://hdr.undp.org/en/statistics/>

The HDI has been criticized because it involves the risk to darken how political and social processes that occur within the nations can generate improvements or downfalls in the index and in the ranking of nations. Moreover, high degree of correlation between its components could imply that one cannot draw significant conclusions about the index itself (Srinivassan, 1994, p. 241). Other scholars claim that the index is in fact just another chapter of ‘reinventing the wheel’.

Now, making things worse, a new index appeared a couple years ago. The Happy Planet Index claimed to be “an innovative new measure that shows the ecological efficiency with which human well-being is delivered”<sup>3</sup> around the world. It is the first index ever to combine environmental impact with well-being, in order to measure the environmental efficiency for each country. The Index does not reveal the ‘happiest’ country in the world. It shows the relative efficiency with which nations convert the planet’s natural resources into long and happy lives for their citizens”<sup>4</sup>. Small islands and Colombia were classified as the “happiest” countries in the world, a result that with no doubt caused hilarity among economists and scholars, and Colombian citizens as well. This issue just reveals the risk to use a combination of indicators falling into some degree of distortion of the real purposes of the HD concept.

In fact, today, the notion of HD includes concepts of democracy, social inclusion and more economic equity. One can envision the notion of HD as a real challenge to the globalization forces of capitalism as they are generating contradictory and complex situations around the globe that forces us to discard any illusion that the world is marching united toward an alleged happy world market economy ruled by a universal democratic state as Francis Fukuyama proposed a decade ago. The HD notion cannot be reduced to the HDI and as C. Rammanohar Reddy (2003)

<sup>3</sup> See <http://www.happyplanetindex.org/>

<sup>4</sup> See <http://www.happyplanetindex.org/about.htm>

asserted. Indeed, we need to rescue the concept of HD from the success of the HDI itself.<sup>5</sup>

Moreover, current data show that despite some convergence in human development indexes, there are clear symptoms that this convergence is already stalling for many countries according to the Human Development Report of 2005<sup>6</sup>, where there is not any convergence in terms of absolute GDP per capita whatsoever. The gap is widening with the exception of some countries that have been able to decouple from the rest of the developing nations as it seems to occur with China and India. The gap keeps widening but orthodox growth theorists try to ameliorate this problem regarding developing countries, based on the concept of conditional convergence, which means convergence within group of similar GDP per capita per groups.

But a careful exam of the literature points out those “critical” levels in human development issues in order to be able to enter in a self sustainable growth path. The problem is that if developing nations do not undertake aggressive public policies regarding this matter, countries will fall into typical cumulative vicious circles of poverty characterized by low economic growth-low human development (Ranis, 2004). This is why the Human Development report of 2005 (United Nations Development Program, 2005, p.17) addresses anxiously that

Viewed from the perspective of 2015, there is a growing danger that the next 10 years—like the past 10—will go down in history not as a decade of accelerated human development, but as a decade of lost opportunity, half-hearted endeavor and failed international cooperation.

<sup>5</sup> See C. Rammanohar Reddy (2003). “The HDR 2003: The Index versus the Approach”.

In [http://www.networkideas.org/themes/human/jul2003/hd19\\_HDR\\_2003.htm](http://www.networkideas.org/themes/human/jul2003/hd19_HDR_2003.htm)

<sup>6</sup> See Naciones Unidas (2005). *Informe sobre el Desarrollo Humano* p. 28. New York.

In sum, improving in Human Development is crucial for a real take off in the development path but it is not a sufficient condition. Besides, if one recalls neoclassical economic growth theories such as Lucas and Romer's endogenous growth models, some policy makers appear to forget that in those theories, the role of human capital is decisive as it is included within the production function, that is to say, labor is really employed and incorporated in the production process. Therefore, the significant point here to be considered for a nation, is not just to achieve higher levels of education and better coverage for the population. It is also necessary to assess that this human capital needs to be really used in the material production of goods and services.

Based on this, one cannot overestimate the role of improvements in health and education in development, giving these variables the appropriate weight regarding the necessity to take care of people's needs in employment and income. Human development cannot be reduced to have a poor population in good conditions of health and education. It also demands that labor force has to be employed, where workers become an important source of aggregate demand that at the same time will stimulate production and economic growth.

Developing economies are linked to a globalization process that at the same time destroys formal jobs and reduce people to tertiary occupation and menial tasks. This process, however, is also able to create modern jobs in selected areas of the world. In this perspective, policy makers in developing nations need to understand that having a healthy and educated people is not enough for development, as it does not allow for societies to escape from poverty, informal jobs and underemployment. To sum up, a real development policy cannot be reduced to improvements in health and education indicators but it needs to address the urgent demands of the people for more employment. At the end, the best policy to fight poverty is to improve employment levels of the population.



## SOME QUESTIONS ABOUT THE KNOWLEDGE SOCIETY

During the last decades some scholars have claimed that the world is going through a process characterized by the transition from Peter Drucker's concept of 'information society' to 'knowledge society'. The third wave of technological change we are enduring since the industrial revolution and the globalization process we are facing today, allows for us to have a glimpse on new possibilities of development. Some world organizations have some degree of confidence that the emergence of a new cooperative model in the world based on knowledge, reciprocal help and public oriented services could be possible, supported on the type of public good we have today such as 'knowledge' (Unesco, 2005, p. 20).

New advantages offered by knowledge societies and a higher human development level in the world would probably generate new possibilities in innovation and competitiveness in developing nations that should enable them to find accelerated shortcuts in their struggle for development.

All human societies have been knowledge societies. As Thorstein Veblen points out, in his recognized essay "The Evolution of the Scientific Point of View", human species has a propensity to idle curiosity that impulse us to discover and investigate our surrounding reality (Veblen, 2005 [1908]). As Veblen himself states, "science and the scientific point of view will vary characteristically in response to those variations in the prevalent habits of thought which constitute the sequence of cultural development; the current science and the current scientific point of view, the knowledge sought and the manner of seeking it, are a product of cultural growth" (Veblen, 1961, p. 38). This knowledge society which has been built and the information network society we have today, have evolved into a new phase of capitalist reproduction guided by a pecuniary behavior, as a key force which drives all its strategic decisions.

The complexity of the Knowledge Economy comes from the fact that knowing is a social process, based on networks of social formal and informal relationships (Rooney and Schneider, 2005, p. 24). Knowing implies an intrinsic relationship with doing. It is a process located in a specific place with material means and people with their own historical development embedded in their own cultures (Rooney and Schneider, p. 26). By this token, the appearance and development of a Knowledge Economy is not a result of just introducing sophisticated artifacts coming from advanced societies more developed in the field of Information Technology (IT). It is rather a more complicated process that implies educational, cultural and institutional adjustments.

Indeed, the process of research and invention is becoming more surprising. As some authors posited (Rooney, Hearn and Ninan, 2005, p. 2),

Innovations in knowledge frequently result from unprogrammed activity, new ideas and breakthroughs; new ideas and breakthroughs are not manufactured to order...and creativity is based in the ability to make unexpected and useful connections between disparate ideas.<sup>7</sup>

In this new scenario, the role of governments is more complex, working as coordinators between society, communities and corporations, based on the criteria that a knowledge-based economy is based on the social and cultural underpinnings of society (Rooney, Hearn and Ninan, 2005, p.5).

Because of this, all current systems of Science, Technology and Information (STI) have been moving from the so called 'Mode 1 of scientific production' to 'Mode 2' (Gibbons, 1999), under the pressure of realities of globalization, and at the same

<sup>7</sup> A good example of this can be seen in the role of entertainment industries ("creative industries") in generating new technologies with applications to other industrial sectors (Rooney, Hearn and Ninan, 2005, p. 3).

time fostered by the interests of nation-states and multinational corporations. Globalization has been transforming the labor process, individualizing and atomizing the process of production through flexible labor markets and off shoring, minimizing the role of the centrality of the national state in knowledge and science reproduction (Carnoy and Castells, 2001).

This fact has generated a multiplicity of reactions from the national states, generating governments' rearrangements of functions and policies to face these challenges. Also, these processes have caused in the case of Latin America and other regions, diverse political reactions that have changed the political scenario.

Capitalist development has been always unequal. Therefore, the challenges countries face today have been underlined by UNESCO in a precise way: the increase of the so called cognitive gap among countries and within the nations themselves, due to inequalities in the distribution of "cognitive potential" cannot be solved just increasing the degrees of interconnectivity. The other danger is the excessive and pervasive salesmanship of knowledge, which worsens the cognitive gap itself (Unesco, 2005, p. 23).

The study of knowledge economics has shown today we are witnessing the tremendous possibilities that science and technology offer to human society in this field by which a 'good' such as knowledge, that neoclassical economics classifies as a public good ( the traditional principles of exclusion and rivalry cannot be applied), plays an important role.

The situation suggested above has posited a clear institutional conflict within a society that has been built within the principles of private property rights. This has led to Paul David asserting that today we are witnessing a copyright and patents wave that has not been seen before, coming not just from corporations but also from universities in areas such as biotechnology, pharmaceutical products and software (David and Foray, 2003, p.13).

But knowledge is not equivalent to material goods. No matter how hard corporations try to create an artificial scarcity, wasting resources in building these walls and fences to knowledge, the reality is that transmission costs of knowledge are lowering every day. Very slowly, some battles have been won for the well-being of society such as the case of generic drugs for AIDS in Africa and the unavoidable presence of free software on the net. The matter of fact we observe in reality is the emergence of new forms of knowledge sharing where it is becoming very common to put on the web data bases, procedures, processes, etc., for free discussion among scientific communities. The profitability of websites that endorse these movements is supported by other mechanisms such as advertising on the web sites, links to diverse business, donations and similar resources.

This phenomenon has caused Paul Adler to predict deep changes regarding future of capitalism. To Adler (2001), the presence of a knowledge society might open the road for another kind of society. Indeed, the basic forms we have known so far to organize production and distribution of goods and services, according to Adler are two: First, those based on hierarchies (slavery, feudalism and 'real socialism'), and second, those based on markets (capitalism). Those institutional structures based on hierarchies are undoubtedly powerless in today's society. The second one grounded on markets, foster the sabotage of the optimal allocation of knowledge through the well known problem of information failures and the difficulty of guarantying the protection of property rights.

For this reason, Adler (2001, p.18) proposes a third way of organizing society based on the concept of trust and resting on knowledge communities using hybrid forms. These communities based on their own interests, would develop contractual relationships among them, based on their abilities, honesty, integrity and openness to change. Adler draws some ideas from Joseph Schumpeter but he modifies Schumpeter's original argument because Adler claims that market capitalism will not

be replaced by control hierarchies but by the increasing role of communities in civil societies and dense social networks able to generate higher levels of living in the population.

One can be skeptical about Adler's hypothesis even though it is very well based on organizational theories. In fact, the problem is that we do not observe this trend in a world under the increasing control of multinational corporations. As Underwood Stephens (2001) asserts, Adler's proposals are not credible unless some huge institutional changes happen in modern society.

However, the current financial and economic crisis can open some space to new policies that imply bringing back the state to knowledge economies, fostering new and creative initiatives for fighting unemployment, global warming and more environmental friendly technologies.

## INSTITUTIONAL ADJUSTMENTS

The advent of knowledge societies means new challenges for developing nations. These countries face the risk to be excluded from these processes if they do not adjust their institutional framework to these new forces that imply a reorganization of production and society.<sup>8</sup>

Scientific and technological change forces generate an important pressure for institutional adjustments that promote and strengthen organizational mechanisms among community organizations based on trust as Adler suggests. This happens precisely in a world plagued by predatory behaviors stimulated by the pecuniary spirit of capitalism. In developing nations the situation is more complicated as market logics of modern

8 In this paper I use the concept of institution in the sense of Hodgson (2004, p. 424) who states that institutions are not just rules of the game that constrain human behavior but they also enable individuals to undertake certain activities. In this sense the role of institutions are two folded: On one hand they limit or constrain human behavior but on the other side they generate power elements to undertake specific actions.

capitalism and industrial societies are not totally predominant. Moreover, the institutional societal fabric is characterized by a complex framework that involves global and local capitalist forces intertwined with power structures based on hierarchical mechanisms that rest more upon traditions and sometimes on blunt force.

In this scheme of things we have habits of thought that are not aligned precisely with the demand of knowledge societies but with backwardness and pre-modern values that permeate societies in developing nations everywhere, mixed with predatory behaviors and the pecuniary spirit of the predominant regime.

Hence it is necessary a process of institutional adjustment at a global and at national level. This implies to re-examine formal legal orderings and to foster change in informal institutions that interact with the legal ones, in such a way that it is possible to orientate them to new values that are promoted now throughout the world: equity, inclusion, freedom of expression as a cornerstone of a knowledge society, respect for human and social rights and democratic participation of the people to decide their own affairs. In other words, all these changes should be aimed to the real well-being of nations.

These new values are demanded by knowledge societies that at the same time face restrictions coming from ceremonial institutions of societies based on market institutions, or on hierarchies as Adler claims. The outcome will stem from a long struggling process, setbacks, reforms and redesign of legal systems depending on a prolonged battle of trenches that might be able to modify the current status quo. With no doubt societies will also need to redesign the economic and financial institutional of trade and monetary and financial system, a process that is happening today almost de facto, with the current financial crisis, vis a vis the new role of China and the rise of new non Eurocentric economic blocks that are challenging the scheme of things today. A new factor that is also helping to modify the situation is the pressure of new global social movements that cannot be ignored.

This process of institutional adjustments will require three basic conditions, defined a long time ago by an institutional economist like John Fagg Foster (1981), in order to be able to foster the opening of society successfully. First, the scientific and technological conditions are already given. This enables us to achieve essential changes in human development in human societies, where knowledge societies could be the lever for that likely scenario where poverty could be reduced and eliminated. Also, this process implies the need to overcome material restrictions in terms of connectivity and digitalization. Second, these changes should be undertaken with a minimal dislocation for societies, creating social protective belts and shields in those areas affected by globalization. Third, it is important and crucial to build a common agenda shared with the people, in order to get support from them in such a way they feel identified with a program that really endorses a higher well-being of society based on knowledge.

The conditions depicted above certainly require, as Unesco states (2005, p. 133), a new governance of science, with a higher participation of civil society in these topics, interacting with scientific institutions, universities, corporations, firms and the state, creating a scientific approach connected with people's culture.

With no doubt, science and technology issues cannot be handled as an asset of privileged minorities under the umbrella of bureaucratic criteria of "academic excellence". Science that does not enter into action, that does not contribute to solve the problems of the scheme of life of the people, will fall behind. Today, scientific information is perceived as effective when it is able to implement social response to public affairs. For this reason, this information should be credible, legitimate and relevant. The challenge here is to know how to link scientists with policy maker decisions through appropriate communication strategies (Cash et al., 2003). In doing so, Science will be meaningful to citizens.

## A NEW ROLE OF UNIVERSITIES

Thorstein Veblen was very critical of higher learning institutions. Very early at the dawn of the twentieth century he envisioned much of the situation we live today regarding our universities. With the development of capitalism and the increasing role of corporations, he stated that,

...the intrusion of business principles in the universities goes to weaken and retard the pursuit of learning, and therefore to defeat the ends for which a university is maintained. This result follows, primarily, from the substitution of impersonal, mechanical relations, standards and tests, in the place of personal conference, guidance and association between teachers and students; as also from the imposition of a mechanically standardized routine upon the members of the staff, whereby any disinterested preoccupation with scholarly or scientific inquiry is thrown into the background and falls into abeyance (Veblen, 1918).

Moreover, Veblen foresaw the tremendous salesmanship spirit that invaded universities when he stated that “It is one of the unwritten and commonly unspoken common places lying at the route of modern academic policy that the various universities are competitors for the traffic of merchantable instruction in much the same fashion as rival establishments in the retail trade compete for custom” (Veblen, 1918).

Now, in the twenty-first century, Unesco (2005) has underlined the process of massive higher education enrollments through the world despite certain lags we endure in developing nations. Obviously college education has not escaped from profit oriented behavior in an environment characterized by the pecuniary spirit of capitalism. In developing countries private universities have been strengthened and preferred in public policies where, with the exception of a small group of a good quality, most of them are just business firms oriented to sell diplomas. Certainly,



information society can help many universities to overcome physical limitations in issues as libraries, journal subscriptions and specialized literature, but it is evident that it is not enough to have computers and connectivity to internet to overcome these limitations.

On the other hand, research networks have fortified university networks, offering new possibilities to faculty and students. If university education is an important asset for the whole life of a person, it is clear that the university of the future must be more flexible and ready to be able to receive different kind of students in a knowledge society.

But we cannot fool ourselves. Universities are under fire coming from different globalization forces. The weakening of the state nation has questioned the existence of strong national state universities, and at the same time technological issues seem to be treated as a different matter from science. The prevalence of pecuniary behavior in capitalism tries to reduce universities to supply the needs of labor markets in a global scenario and to attend demands from corporations in technological aspects.


Finally, postmodernist scholars and followers of the cultural approach have questioned universities in the sense they have lost their role in questioning dogmas and have become bureaucratic machineries in search for an 'excellence' demanded by the market (Readings, 1996). Moreover, according to Readings, modern university has expelled from its mission any concern for thinking and culture, aiming basically at obtaining profits from its activities.

Yet, I think universities are still a special organization of governance of knowledge in modern societies that needs to adjust themselves to the pressure of markets but at the same time have to attend new questionings from a changing cultural environment today. For that reason I agree with Delanty (2002) who claims that the university must transform itself in a new area of mediation between culture and science. The university cannot be only culture or only science. The university cannot subordinate

itself to managerial bureaucratic strategies of globalization but it will need to continue with its role of criticism and questioning of society searching for solutions. If we recognize that the process of building knowledge is a social process, the university will continue to be one of many scenarios where several knowledge communities interact with each other, engage in a dialogue and cooperate.

The new university must be more interdisciplinary and trans-disciplinary. It will have to interact with a more informed public that understand the role of science and technology. It has to be open, flexible and above all, it should be aware of the dangers of ceremonialism and typical conservative behavior of closed communities. The same redefinition of the role of national states at a sub-national level, will request from universities a major role in the solution of problems linked to their environment under a global perspective.

## CONCLUSIONS

In this paper I have illustrated how knowledge societies develop in front of us, opening many possibilities in human development matters and development in general. But nothing will happen in a mechanistic way from market forces and vegetative diffusion of new technologies. Improvement of the well-being of our peoples throughout the world will require deep institutional adjustments that will redirect us toward new paths challenging the hard logics of markets, toward more inclusive, equitable and democratic projects. This will require great doses of human individual and collective agency, public policy and collective action in the real world that we must undertake. Otherwise every thing will pass over our heads repeating some previous experiences from the past. 

## REFERENCES

- ADLER, P. (2001). Market, Hierarchy, and Trust: The Knowledge Economy and the Future of Capitalism. *Organization Science*, Vol. 12 (2), March-April, 215-234.
- CARNOY, M. & CASTELLS, M. (2001). Globalization, the knowledge society, and the Network State: Poulantzas at the millennium. In *Global Networks*, 1 (1), 1-18
- CASH, D., CLARK W. ET AL. (2003). Knowledge Systems for Sustainable Development. *PNAS*, Vol. 100, (14), July: 8086-8091. In [www.pnas.org/cgi/doi/10.1073/pnas](http://www.pnas.org/cgi/doi/10.1073/pnas)
- DAVID, P. & FORAY, D. (2003). Economic Fundamentals of the Knowledge Society. *Policy Futures in Education-An e-Journal*, 1 (1), January , 1-22.
- DELANTY, G. (2002). The Governance of Universities: What is the role of the University in the Knowledge Society?. *Canadian Journal of Sociology* , Vol. 27 (2), Spring, 185-198.
- FOSTER, J. F.(1981). The Theory of Institutional Adjustment. In *Journal of Economic Issues*, Vol. XV, (4), December, 923-935
- GIBBONS, M. ET AL.(1999). *La nueva producción del conocimiento: la dinámica de la ciencia y la investigación en las sociedades contemporáneas*. Barcelona: Ediciones Pomares-Corredor.
- HODGSON, G. (2004). *The Evolution of Institutional Economics*. London: Routledge.
- NACIONES UNIDAS (2005). *Informe sobre el Desarrollo Humano 2005*. New York.
- RAMMANOHAR REDDY, C. (2003). The HDR 2003: The Index Versus the Approach in [http://www.networkideas.org/themes/human/jul2003/bd19\\_HDR\\_2003.htm](http://www.networkideas.org/themes/human/jul2003/bd19_HDR_2003.htm)
- RANIS, G. (2004). Human Development and Economic Growth. *Economic Growth Center*. Discussion Paper N°. 887. Yale University.
- READINGS, B. (1996). *The University in Ruins*. Boston: Harvard University Press.
- ROONEY, D. AND SCHNEIDER, U. (2005). The Material, Mental, Historical and Social Character of Knowledge. In D. Rooney, G. Hearn and A. Ninan, *Handbook of the Knowledge Economy*, 19-36. Northampton, Mass: Edward Elgar.
- ROONEY, D., HEARN G. AND NINAN, A. (2005). *Handbook of the Knowledge Economy*. Northampton, Mass: Edward Elgar.

- UL HAQ, M. (1995). *Reflections on Human Development*. New York: Oxford University Press.
- UNDERWOOD S., C. (2001). The Ontology of Trust and the Transformation of Capitalism in a Knowledge Economy. *Organization Science*, Vol. 12 (2), March-April, 238-240.
- SRINIVASSAN, T. (1994). Human Development: A New Paradigm or Reinvention of the Wheel?. *Papers and Proceedings of the 106th Annual Meeting of the American Economic Association*, Vol. 84 (2), May, 238-243.
- STREETEN, P. (1994). Human Development: Means and Ends. *The American Economic Review*, Vol. 84, No.2, *Papers and Proceedings of the 106th Annual Meeting of the American Economic Association*, Vol 84 (2), May, 232-237.
- UNESCO. (2005). *Hacia las Sociedades del Conocimiento*. París, Ediciones Unesco, 2005.
- VEBLEN, T. (1918). *The Higher Learning of America: A Memorandum on the Conduct of Universities by Business Men*. New York: B.W. Huebsch.
- VEBLEN, T. (1961). *The Place of Science of Modern Civilization and Other Essays*. New York: Russell and Russell.
- VEBLEN, T. (2005) [1908]. La Evolución del Punto de vista Científico. En VEBLEN, T. *Fundamentos de Economía Evolutiva* (pp- 261-282). Bogota: Universidad Externado de Colombia.