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Artificial Intelligence Data and Internet of Things for the Design of Bottom-Up/Top-Down of Science and Diplomacy for Sustainable Education with Perspectives to Start-Up Developments

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Abstract

This brief communication intends to develop critical thinking on the development at different levels that could be evaluated in the well-being of humans from the local development towards a global scale or planetary point of view. Therefore, it was presented and discussed how Artificial Intelligence tools could provide important contributions and influence in the design of critical thinking to develop ideas and insights within Research as well as funding for technology transfer. In this context, it is mentioned that the methodology of work was based on the collection and analysis of the most important and high impact Research communications collected in the last years. Therefore, it should be highlighted that the generation of funding and economy for sustainability that It should be based on critical thinking and analysis of what is need it from the close surroundings towards longer distances as well as in the inversed direction.

In this regard, the main axes that support it are based on the importance of entailment of individuals in their close surrounding as well as to longer physical distances and cultural differences. In this context, the existence of large diversity and varied Multicultural differences and reasons should be highlighted. These factors could affect the developments of technology, education; level, and quality of life. Thus, the Economical and development indexes could be largely varied and different between them. For this reason, it should highlight the local development within shortened times by interacting to receive or provide materials with aggregated value or non-tangible values. Therefore, it could be accelerated the process of improvement in a targeted field looking for average homogeneous development everywhere. And there, is where the link-up and transfer strategies of technology and education by creation of varied strategies in communication media.

For example, the communication plays an important role to transfer knowledge within different social statuses and imagining the development of thinking that later it will be the basis for the next generation of technology. In this manner, it could be coupled different levels of educations degrees by a factor in common related to curiosity and open minds to learn, work, and live together in the context of developments of new smart manners of living where economy and new encrypted currency are involved and provide by different manners sustainability. In these perspectives the development and education at the University and higher degrees taking into account the transmission of important factors such as; i) entailment, ii) development of knowledge, and iii) transference, is fundamental. Finally, it should be highlighted

the particular need for good human relationships, emotional intelligence, and diplomacy to afford from the simplest challenges to the higher ones.

Keywords: Artificial Intelligence, Encrypted Currency, Economy, Sustainable Development, Education and Critical Thinking, Research and Education, Science and Diplomacy, Technology Transfer

Introduction to Big Data and Artificial Intelligence

The information for the generation of critical thinking and new projects related with high impact interest in social and natural sciences is highly required to arrive to develop fundamental Research towards real transfer to applications [1]. In order to get control of this important factor, it is required to manage a big quantity of knowledge from the origin considered previous one to the current in progress for the proposal of solutions and new developments within the desired Research fields [2]. These needs are challenges to overcome and manage. Therefore, the strategy to get Research funding is required to manage Big Data and Artificial Intelligence that may not be considered in many cases but it is used unconsciously by the already incorporated Internet of things and free access technology with minimal cost provided a service in developed and in developments countries or regions of the globe [3-6].

The entanglement between Academia and Industry or the productive sector of aggregated values is an essential factor to manage in life in general as well as within Education, development and technology transfer. This arises from the simplest interpersonal interactions from where a complex matrix or network of connections begins where certain targeted objectives can be activated or deactivated [7]. This is basic for sustainable development and required to participate locally with an impact in the vicinity to greater distances and in the opposite order [8,9]. Thus, mechanisms can be activated to increase levels of knowledge and development to any desired level through the simple targeted knowledge that is desired or required [10]. The existence of different organizations that participate in mentioned activities is very important and required, as well as it is knowledge to let it works [11].

In this way, it is possible to aspire to reflect the development at all levels that can be evaluated for the human well-being from a local to a global or planetary scale as it is basically required. In this sense, the main axes on which it is based are the importance of individual interactions in their vicinity as well as at greater physical and cultural distances [12]. Moreover, these two aspects should be mentioned in a reality where there are many cultural differences [13]. These factors affect technological development, education; level and quality of life. In this sense, those providers of knowledge and know-how will be the directors in communications and they will be able to contribute more to the development outside than in their immediate close environment (Figure 1). And of course, all types of activities require carrying out local activities to accomplish targeted objectives previously planned at both sides [14].

So, from the acceptor as well as from the donor of knowledge or material with added value are required by local organization, but in different manners. Similarly, on the social acceptor side, the situation will be improved in some required aspects [15]. And in this way, one could aspire towards a global improvement between a donor and receiver, which with the passage of time it could be generated an effect in the opposite direction. So, it could be generated feedback up on needs. And in this way, there is the possibility that it would be an overall improvement in both directions. In these block chains the economy and currency are essential factors to control accurately and maybe it is the only one that permit that. Of course, that economy is generated by societies formed by persons but in the moment to begin social and technological entangling to improve lives and well-being [16].

This is a very simple concept on a global scale which has taken a long time to be incorporated into new policies and education at a global level. If a scale of years or generations is contemplated, this implementation can be considered very new if it focuses on the history of the human being. And it is not new, it should be noted that. However, for the ongoing generation or the next generation it is. That is why the current stimulation towards entanglement and activities of development in different areas of Science with an impact on human development could show an impact in the near future with very interesting prospects in the short, medium and long term as well. In order to accomplish that, the education of the different members who are involved in the interactions and blockchain activities is very important, as well as all the others placed at closer and longer distances.

Similarly, continuous training at different levels and social data All these inter-connected themes and topics were added in the discussion in order to open the discussion about how it could be proposed targeted objectives at different levels and in this manner organize the economy to optimize. In the same context, it should be contemplated for a harmonious intercultural relationship, of knowledge in search of an improvement in the quality of life of all those members of the community involved. And from an international relations point of view, the development of diplomacy in education and science is an essential factor. In this regard, the different topics mentioned have been developed with an interdisciplinary approach where the social and natural sciences are closely related: and one cannot exist in the absence of the other.

So, this communication intends to present and discuss the main variables involucred in sustainable social developments from local participation towards global perspectives as well as in the opposite direction. Therefore, the hypothesis of joint developments is shown from recent reports, communications and current ongoing projects. These communications were developed in the context of Research applied to the study of Big Data collected from real communities and societies.

Therefore, the analysis of results was not from simulated data. By this manner, it was afforded to note the importance of Education, Research, Social interactions and Sciences contemplating all disciplines. Thus, Diplomacy contemplating the creation of social organizations and Technology entanglement up of needs is considered as a sustainable way of development required (Figure 1).

In this context, then, it was developed a brief discussion about current Research projects and variables involucred in the development of the productive sector, leading to an iterative process of education, and continuous formation, where entrepreneurship and Start Ups could act as important factors of sustainability.

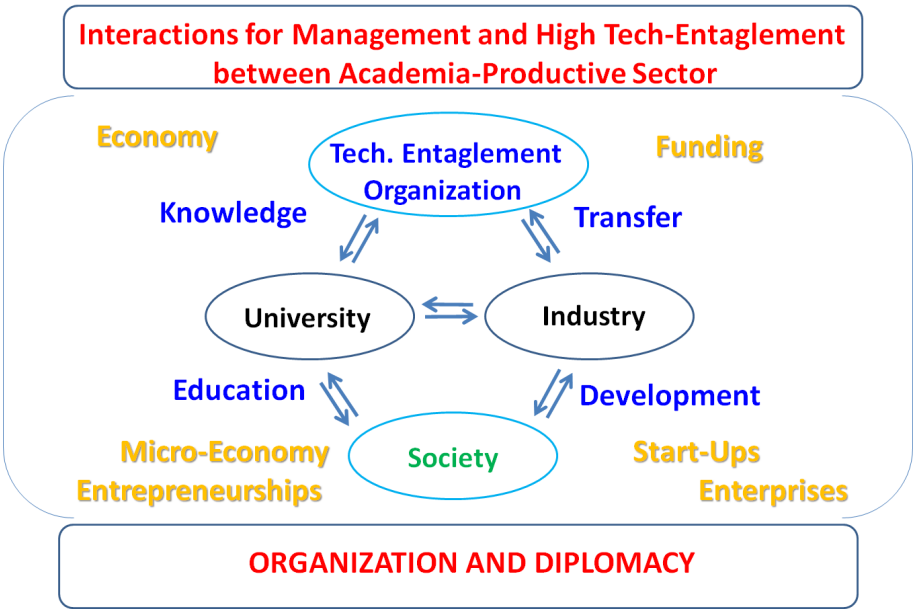

Figure 1: Schema of Management and High Technology Entanglement Interactions to Develop Research Proposal Based on Sustainable Funding and Development

In all these previous mentions there is a huge contribution and importance that should be focused on managing, and developing organizations in order to fix the direction of different activities to accomplish targeted objectives and needs. In these aspects, it is highlighted that the local development in some fields are very important to be communicated or transferred up of needs in order to be sustainable. This challenge to overcome thinking with a global perspective is part of the important objective that in the managing activities should be contemplated [17].

Education, Research and Development from insights to interactions

The development in Science and Education with an impact on the technology that we use daily is a challenge at different levels to involve the different constitutive elements of the local community towards greater physical dimensions related to geographical limits. In this regard, the media play an essential role in transferring knowledge to the community at different levels [18]. This process prepares for the interpretation of changes and modifications at the organizational level in society as well as for the development of new possible ways of smart and sustainable life where the organization and economy are essential factors to manage. In this sense, local development focused on education, work, and like all related or consequent cultural activities are very important [19]. And this must be contemplated in the vicinity of the environment of each one of the individuals of a community regardless of differences between them; since the common factor which unites the different constitutive elements is to live with a better quality of life, in this way, any local start referring to a modification related to education or any other variable that affects the human well-being will have an impact toward larger scales [20-22].

And that is so because all human actions have a reason for being and are a response to a smart responsive stimulus. And, it is there, the construction of a sustainable society can be modulated, which is openly and known to a large majority of people who have access to information and are dedicated to it. Those participants must continue to think of different alternative ways to create access points to information and education to raise awareness about the importance of local development towards larger scales and dimensions. In this direction, it could be mentioned all those for example that are dedicated to developing a new generation of entrepreneurs, businessmen and researchers, who promote innovation in Technology, Nanotechnology, and emerging new Technologies from its Research and Development (R&D) laboratories [23].

In these previous paragraphs, only one of the variables was mentioned, but others can also be contemplated; such as production, manufacturing, know-how, to build and provide everything we need as humans. Thus, in times where access to information is favored through different modalities in the media, it is essential to design new alternative ways

to provide this information to the different levels of society. In this way, in a developed and advanced society, and director of new trends, lines of thought, etc. should provide these insights in different formats within media to support sustainable life from local towards longer distances. Thus, the economy and the creation of currency should as well inter-connected in order to fix long terms objectives depending on needs. It is there, that written communications, as well as through other communication media, could be taken important roles to educate all citizens in different fields of knowledge in formal and non-conventional ways in order to develop brain plasticity within a complex world [24,25].

It is important to mention that even if it is a challenge to initiate related activities, this should be taken as a way to proceed where success is not assured, but it would be one of the only ways to achieve success in the targeted objective with the pass of time. So, the process of iteration of analysis, discussion and conclusions should lead to improved status in the long way to achieve results. This concept is shown throughout human history; and in this manner; it could have an idea of what is the meaning of sustainability and perseverance is. In this way, sustainability could be achieved among all the different local points which are generating actions with effects at greater distances. There, managing organizations is required to obtain successful achievements. Therefore, the management should be accurately organized previously in order to contemplate all variables that could affect over time. Thus, future predictions could be applied. Actually, in education it could be begun to collect Big Data to conclude about social development in different disciplines. And by this manner, later it could be compared with previous generations, or different intervals of time [26]. To accomplish that, the data collection accompanied with appropriate artificial intelligence is very important.

Science and Diplomacy with Global Perspectives

This subsection presents how the current state of the organization and status of knowledge it could be improved towards further proposals, funding accompanied with innovation considering targeted objectives upon needs within the society. In these perspectives, from local developments towards longer distances, other types of activities more related to organizations focused on education for research, development and entanglement of technology development should be contemplated. These activities should be coordinated by varied organizations associated with education and financial institutions where diplomacy is incorporated if it is considering a global perspective [27]. How to proceed in these perspectives is not evident and it should be evaluated varied situations, local needs and interconnected potentials inter-connections towards global perspectives. So, all type of activities has an impact on the formation of critical thinking within the population that could affect the final idiosyncrasy and attitude against new external proposals as well as the generation from their own society [28,29].

In this way, it is important to mention that the generation of new policies and organizations to promote education for Research and developments towards technology entanglement within different productive sectors such as Educational, Technological, and Research sectors as well as within the organizations representing the Industrial sector is an important factor of development. Different training events and workshops can be mentioned on this subject where social and Natural Sciences are met to show and discuss local social challenges towards a global vision or extend the frontiers in order to find new insights and solutions in varied targeted objectives, problems, and problematic situation or conflicts [30]. It could be mentioned the Diplomacy and Democracy Convention organized by Argentinian Association of Canadians Studies (ASAEC), supported by the Canadian Embassy in Argentine, where it could be found varied themes and related topics such as target organizations for sustainable development [31]. For example, the Laboratory of Latino-American Studies in Montreal, Quebec, Canada leaded by Prof. Victor Armony at University of Quebec, Montreal (QC) Canada.

This event takes place at the National University of Rosario and various foreign participants interact to discuss their roles in complex social networks [32]. It is just a mention of how it could be developed from local further interactions and new opportunities for discussions about sustainable developments. And in this context, it should be mentioned that within these types of meetings, forums, and workshops is possible to find Researchers and projects where it could propose collaborations as well as add insights with other perspectives or propose their own projects. In a similar manner Horizon Europe Brokerage events where there have been presented and discussed Research projects and ideas in development for future technologies and sustainable development offer many opportunities to hear from the direct involved Researchers and projects as well as to present ideas and potential future project in collaboration. Therefore, it is an open source of ideas and funding that are on the table for discussion all around the globe [33]. Therefore, different governmental and non-governmental organizations are promoting technology entanglement, Research, development and funding from local towards global participation.

In this manner, local needs that require basic contributions for their immediate development can participate, and also others with great potential for the delivery of material with added values and knowledge for developments towards longer distances but based on a capacity developed locally so far maybe from it was conceived, designed and build or fabricated. Just to mention, in some cases, there are actions between different countries or regions of the planet where it is required diplomatic actions and support. Thus, it is important to remember the meaning of diplomacy as a branch of politics and organization that deals with international relations, where procedures that regulate the inter-relationships between the different states must be established. In these perspectives, there are open sources of collaborations around the planet that should be contemplated within hierarchical organizations for sustainable development and funding generation [34].

Diplomacy is essential for communications, relations and multilateral actions in search of objectives that favor the different participants. This is also a simple concept and applicable to different situations where it is required to develop or contribute something necessary in both directions concerning the intervening participants [35]. In this way, different educational levels can be coupled with a common factor related to curiosity and open minds to learn, work, and live in a community in the context of developing new intelligent sustainable ways of living. With these perspectives, the development and education at the University and Postgraduate level in sciences taking into account the transmission of the importance of the aforementioned factors such as; i) connections with other partners and institutions, iii) development of knowledge, and iii) transfer, is essential. Finally, the particular need for good human relations, emotional intelligence, and diplomacy at all levels must be highlighted in order to succeed from the simplest to the most complicated challenges to be addressed in the course of any development. About Diplomacy and all themes and topics related it should be noted the importance of all members within different organizations to act together with values in common to maintain the work together [36].

In this direction and sense there are currently various organizations promoting diplomacy to bring different cultures closer together in order to create a global citizen, or at least with a global conscience. In this context, there are many organizations that propose interactions within inter-different parts and regions around the planet [37]. It could be considered that the globe is actually interconnected. Maybe there are natural interactions due to proximity such as Europe and America; however, there are in other ways towards Europe, America, Asia and Africa as well. So, it should be mentioned many other local examples maybe; that should be expanded in order to develop awareness and critical thinking on special needs focused on diplomacy and education in different parts of the planet but highlighting the importance of the local point of view at each place in this complex world [38]. It could be mentioned special programs related to programs and events where the European Union shares knowledge and allow participation within open forums to discuss Research and Developments within collaborative projects with future perspectives in the next generation of materials and applied technology.

In addition, new programs focused on Science Diplomacy leaders developed in Switzerland can be mentioned, where leaders and aspirants meet to train and discuss it [39,40]. These organizations are required not only for inter-lateral relations; as well it is to support peace, education and economy between different parts of the planet with variable culture, history and heritage. Finally, it is noted that within all these activities is need, an appropriate management of International relations and in accord with laws from all intervenient members. Thus, Diplomacy and management focused on rights and Protection of global collaboration in the context of Research and developments movements of students, and highly qualified professionals and Researchers is in current discussion.

Importance of Technology Entailment for Development and Technology Transfer

The meaning of entanglement within Technology could be applied from fundamental applied Research developments towards services from academia to Industry up of needs as well. So, the objective is the interaction and communication of needs between Academia and the productive sector of materials with added values. In this context, the generation of funding opportunities is opened to get new opportunities for sustainable development. This way it is not so far from fundamental Research; or unless it should not be considered so far due to the need that all knowledge acquired it should show some expected applications to improve the human development.

Thus, the development, and technology transfer activities, which arise from the intrinsic training of the different members of the communities involved are required. In this context, the link is the union between two parties interested in exchanging knowledge and technology as needed. Knowledge may be related to the know-how of a product or material with added value; as well as focused on education. So, about materials, it is noted that products that are essential for life could be obtained by these entanglements of technology and needs. It means that it could be acquired help, support, and direct transfer if necessary, depending on the case, if the product is available and it has been already developed.

In recent times, the linkage for different products has been largely positively affected by different inspiring sources of innovation. From where new technologies have emerged applied to different products of daily use and specific high-impact technology such as within life sciences. It is just to mention the recent Corona Virus pandemic situation where it was involved all over the globe in the prevention and treatments as soon as possible to get controlled the problem. Conceptually, development is necessary to obtain everything that is needed to live based on the organization of society [41]. And in these perspectives, it also involves the way to obtain everything mentioned. And in order to accomplish that it should be taken into account previous constructions and development mechanisms in the different points or localities involved and established initially to participate in a long road or perennial process to develop and get solutions for sustainable development.

By this manner, the geographical location, and economical factors developments should be known, as well as statistical indexes, Demography and Economics, which can be very varied. Furthermore, it is not easy this evaluation and application; however, these factors should be highlighted to carry out a local improvement in short and mid-term intervals of time, as it is necessary to connect, interact and either by receiving or providing a material or know how. And it is there where communication between different interested parts to transfer Technology and Education in different spheres of human development is vital [42]. By doing this, it could be expected to improve the quality of life with perspectives to improve

well-being in different parts of the planet. Therefore, in the last decades drastic changes in education policies have been applied through the creation of different strategies based on the media within different formats, as well as implemented in formal education programs.

The language and critical thinking are involved in these modifications applied [43]. This is a general mention that could be varied depending of the place; however, the trend in education is going through this direction. At the same time, there is a huge augmentation of organization carrying out activities of entanglement in technology and education that is only achieved in a diplomatic way accompanied by highly qualified human resources. So, activities of management are higly required in this high impact work; where Science, know-how and the productive sector are joined to collaborate and generate a targeted product or material with added value and use within a block chain of production [44].

Future Perspectives and Practical Implications

The themes and topics related to artificial intelligence and big data are very broad; however, from their analysis improved decisions could be taken in order to develop targeted aims. In this context, the impact of these decisions could be great in each of the daily activities that carry out the members of the society. This has had repercussions regarding the needs of the human being as an individual member of a group; and in this sense, the education has an important contribution. In this context the bottom-up and top-down of knowledge is very important to optimize funding and projects developments within Sciences. And it should be noted that it is a very important key point to get success because the same funding could be applied to varied objectives [45]. But not all the targeted objectives or aims could permit to get the success of real development. In the whole process is involved management and block chains working together in order to analyze, iterate and set ups news platforms with decisions looking for improvements in the long way towards the targeted objective [46].

Therefore, it is important to take into account the variable of communication and interconnections between different actors with the capability to take decisions on the previous mentioned roles to set up an organization to develop actions in order to accomplish targeted aims. In this context, it is also important to highlight that fundamental science accompanied by objectives focused on the generation of materials with functionality is of high interest in society [47]. So, the materials with an added value for daily use are highly desired. In addition, considering new technologies from the conception of a functional material is important to transfer it to a device which it could be part of portable and miniaturized instrumentation, such as "Development of Nano-, Micro devices for the next generation of Biotechnology, Wearables and miniaturized Instrumentation". In this way, in search of new non-classical light and energy generation strategies based on hybrid silica Nanoarchitectures with organic emitting molecules of the Laser type, it led to the Dynamics of Nano-Biostructures assemblies with a generation of Nano-Bio-Ultra luminescence properties non-observed previously [48-50].

This work has been recently published and has the title "Self-assembly dynamics and effect on synthetic nanobio-optical properties by hybrid mono-colored silica nanoparticle labeling of Escherichia coli", and it has interesting perspectives from a Biophotonics approach towards Biodetection and generation of Hybrid Nano-Biomaterials with potential Biolaser properties [51,52]. Therefore, in the previous paragraphs, different topics and related publications have been mentioned, which have involved Multidisciplinary Research as a result of Fellowships, Entrepreneurships, Research Grants, and funding generation by Technological and know-how entanglements between Academia and Industry relationships with different teams of work, Research groups and Universities.

In this context, it should be highlighted the importance of the information for the decision making and project management in different areas of Science. With this direction, in this context it is mentioned the importance of generating large-scale social projects such as the "Future ICT Project, from the European Union, Participatory Computing for Our Complex World" should be highlighted, to explore the development of life in different societies in the planet based on the collection of data and the search for experimental data as well. These projects, related to different areas of science, but with a common factor and a social point of view, have been subsidized by the "European Union Seventh Framework Program - Project 'FuturICT", being coordination and support in taking actions on Information and Communications Technology [53]. And these may also have other implications related to a selection of contacts and assemblies of interactions in the context of large-scale Data manipulation, which also generates analysis and projections in future perspectives which make linking and development. However, it should be mentioned that, as within all Research fields, and in particular where Natural and Social Sciences are involved, there are limitations that can affect the study in short terms such as the Big Data collection [54]. It is required technology; time, skills, and other variables to achieve the analysis; and success will arrive over time.

Conclusions

To conclude, it should be highlighted that all these ideas, the current status of developments, and proposals upcoming within Sciences should be taken into account from a local point of view towards a Global vision, which implies that a problem in a remote local place can have an effect to greater distances. In this way, the World Economic Forum (WEF), also called the Davos Forum, highlights topics and themes that should be developed as a priority. This, international non-governmental organization based in Cologne, meets annually in Davos (Switzerland) to discuss economic problems at the planetary level [55]. Similarly, the importance of security in current times must be taken into account, since it can

again affect the future of the planet.

Thus, different point of developments placed in different geographical sites need to work together, promoting and assuming responsibilities in common based on sustainable development for a healthy planet; but considering prototyping, modeling problems and solutions in order to predict factors of developments to be applied in the future. In both important perspectives, the Education and continuous formation play a fundamental role due to in absence of them, the members of the society or focused community could not participate actively and conscientiously. And, in this context, of course that the members of Academia and Productive sector either. As well, the Diplomacy if it is afforded the discussion across frontiers is essential, and consequently the education other time could support understanding between the different partners.

In these perspectives, after a siècle of movements and global events, these hypotheses considering the mentioned variables are showing some positive results. Many of them arrive to publications but there is still being there a huge Research work to accomplish looking for conclusions and iterations of analysis. Therefore, these ongoing trends could be incorporated in the proposals up of needs. Thus, fine adjustments are in progress, and from single data points to the bulks is expected further Research work. Unless, these could be some expectations for the near and far Future.

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sf500.com.ar/) Life Science Foundation.

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