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EDUCATION, MEDICINE AND ARCHITECTURAL PRACTICES FOR THE 'TRANSHUMANIST SUBJECT' OF THE 21ST CENTURY

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Abstract

This paper evaluates the parameters of what has been called 'posthumanism' or 'transhumanism' from the idea of the biographic subject of the 20th century. The human/transhuman subject of the 21st century is addressed from three of its essential axes: first, education, which is understood in a global and holistic sense that affects all the aspects of a person. It is also a perspective that gives access to the other two variables tackled in this paper: health and space. Secondly, medicine: through an analysis of the renaissance and increasing demand of the medical humanities and through cross –biographical and structural– and multidisciplinary (ethics, philosophy, history, arts, psychology, etc.) references, a model for reflection is proposed, facing the imminent perspectives of change that will soon reach the regulated training in the field of health sciences. And finally, space. Contemporary architecture is part of a liquid culture in which everything is constantly redesigned: from infrastructures, installations, new materials, interfaces, networks, etc., to the very data from which they are nourished. In their interscalarity, all of them have a major impact on our bodies and subjectivities, producing complex urban organisms, landscapes and anthropic territories that are constantly modifying the face of the planet and its precarious environmental, political and social balance. It is thus necessary to rethink the conditions of contemporary design processes so that citizens get openly, consciously and actively involved.

1. Introduction

The technological advances occurring from the end of the 20th century to the present time have deeply disrupted the human being and its relationships, with each other and with the environment. It is a consequence of the vertiginous changes that appear to happen even faster than the society's ability to assimilate them. Although the benefits of these advances are of great importance, they also have significant drawbacks. It is possible that 'transhumanism' is the umpteenth version of the 'new man' myth that had such a relevance in the philosophies of the 19th century and the revolutionary myths of the twentieth. This paper shows keys to redirect progress. For this, there have been determined three complementary axes that define individuals, being the result of their philosophy and behaviour: education, medicine and architecture.

Some considerations are proposed regarding the idea of the biographic subject as a holistic and integral representation of the human being as a basic context in order to determine how education, health and space are some of its essential components. At the same time, the three of them represent, on one side, means of inter-subjective relationship with the environment and, on the other, areas of development for the human being that are defined by its acts. The biography is a genre in which these aspects are evident and the biographic method is the procedure that allows identifying them in the vital trajectory of the individual and its universal connection.

Nowadays we face other trials connected to what many intellectuals and scientists call 'transhumanism'. We are basically working on different techniques to separate the human body from the human being, its potentialities, intelligence and affections –what we call personality or conscience. In the words of classical philosophy, we are trying to split body and spirit, person and personality. 'Transhumanism' is a reality that –whatever the benefits its application in bioengineering may report– has led many people to discuss the creation of a whole new race, a hybrid between man and machine, and even a combination of artificial intelligence, nanotechnology and human life –in short, a radical change in the way we conceive the human being. One of the latest landmarks in 'transhumanism' came in 2010 when Craig Venter announced that they had succeeded in artificially creating a chromosome from a million chemical bases. This artificial chromosome was produced entirely in a test tube using computer modelling. For 'transhumanist' advocates, all individuals will be able to choose among a wide catalogue of DNA modification and body improvements, so that technology –broadly understood– would allow us to escape our ultimate destiny (death), our human nature, and even those social imperatives that constrain us.

The 3rd Istambul Design Biennal (Are We Human?) curated by Beatriz Colomina and Mark Wigley concluded, in 2016, that the human being is the only specie capable of creating its own experience of reality throughout the elaboration of multiple layers of information and design. From the first prehistoric tools to the exponential expansion of our 'transhuman' capacities, this experience has enabled us to face the world in increasingly unexpected ways. Understanding architecture as the production and management of environments that host many of the main activities of our specie, since the 60s there have been many voices that question the paradigm of permanence that is legitimized by modernity. They warn that, in a constantly changing and complex world as the one we live in, where thinking from durability and/or individual authorship is bound to the failure of its inoperability (Faura, 2016), it is urgent to propose other strategies so that the managements of time and space in architecture and in the city are assumed from open, integrating processes that have no formal preconceived end.

2. Problem Statement

The biography is a genre that allows as many analytic criteria as perspectives and disciplines for its application. Its interpretative freedom gives a wide range of possibilities that includes, from the false biography to the historical one, going through the whole spectrum of possible variants (Del-Olmo-Ibáñez, 2015). On the other hand, it includes the two dimensions of the person living in the world: the individual and its connection with humanity and with history (Dilthey, 1978), both in all their complexity.

The interest of the biography in our approach acquires meaning from the two components that conforms the totality of the individual: the psychological and the social. Within the first one, we find the processes of self-analysis and reflection upon 'the other' and its verbalization (Dilthey, 1978; Verkindère, 2004); the distinction between the 'historical self' and the 'narrative self' (Pozuelo Yvancos, 2006, p. 34); personal and academic education (Dilthey, 1978; Dominicé, 2004); or the spiritual-religious sense, which allows access to the inner universe, the difference between religion and the institutionalization of the sacred and the analysis of the individual theodicy, which determines the way to face suffering and death (Le Grand, 2004). That is, health (also in a global sense) and its absence. The second perspective is the social one. The subject is categorized by its presence in a community, which is revealed in its language, in the fact that shares a social universe and establishes inter-subjective relationships that show the importance of the context. This environment is affected by ethical and aesthetic components, as well as by philosophical stances, which appear in the biographical story. It becomes both a carrier of an ontological significance and a transmitter of historical memory in a time and space (Dilthey, 1978). Both are mutually determined by the human being. The third line here presented intends to provide a space description for the 'transhumanist subject' and its relational dynamics.

In a scientific world in which the personalized and precision medicine opens infinite roads to prevention, diagnose and therapies, one of our main concerns is the growing dehumanization that is occurring in the healthcare realm. From classic times, the doctor has had as object and subject of its performance the clinic investigation of the ill. Nevertheless, the technologic advances allowed that, through the 19th and 20th century, the attention of the clinics slowly drifted to the illness itself, reaching its most critical point in the generalization of the checkups in the second half of the past century. Advances in the field of genetics in recent years have highlighted how each patient is unique and how doctors should return to focus their attention, individually, on each of them. This poses two tremendous challenges: first, in the face of the growing modernization of clinical science, it is imperative to re-humanize healthcare, make it patient-centered again (Sacristán, 2018). Secondly, the need to intellectually rearm the health professionals from a humanist point of view.

The current economic model, based on the unlimited consumption of limited resources, remains operational at the expense of investing a large amount of energy in the construction and management of infrastructures. Despite their apparent technological sophistication, these infrastructures do not solve structural problems. This model of 'growth", which is eminently urban –or, more accurately said, post-urban, since cities in the 21st century have affected the rest of planetary ecosystems–, entails a decline that is not only material, but also of a sociopolitical nature. The objective of this study is double: on one hand, to highlight the need to research, design and experiment with technology-based systems aimed at improve the management and sustainability of urban infrastructures. On the other hand, to insist on the need to

activate its effective (political condition), efficient (technological condition and design) and democratic-resilient (social condition) use (De Retes and Parra-Martínez, 2010). These conditions would favor a creative impulse in the generation of new services and stimuli with which to redefine the physical and virtual environments of our cities.

3. Research Questions

The underlying questions in the three parts of this paper are how to apply a valid pedagogy for the human being that is embedded in a process of technological advance that seems unlimited and that exceeds the mere concept of 'human being' and the parameters that have been commonly attributed to it until now.

In this same context, focusing on the medical field, we must consider how to institutionally approach the need to re-humanize healthcare and the essential intellectual rearmament from the humanist perspective of health professionals.

Finally, in the 21st century city it is crucial to formulate a new definition of urban space in terms of information flows and not so much of physical realities. This would allow us to think about different management models facilitating a more flexible, participatory urbanism overcoming the traditional models of forced anticipation based on oversized solutions. Facing the material decay of our cities, their intangible deterioration and, more specifically, that affecting their flows (light, air, acoustic, electromagnetic pollution, temperature increase, noise, loss of information, etc.) it is required a greater pedagogical effort so that urban blight is not always perceived as a problem. In this sense and going beyond Allen's (1999) vision of an infrastructural urbanism which understands architecture as material practice -as an activity that works in and among the world of things, Jaque (2017) proposes to assess architecture as 'transmaterial practices', referring to the way "architecture is produced by the interaction between processes developed through the coordination of different media material: the built environment, the biology of beings, the online interaction" (p. 14). That is, as a way of assembling domesticity with the great infrastructures and of making visible the differences and conflicts of the present time.

4. Purpose of the Study

This research focuses the biographic story from its psychological and sociological aspects, emphasizing that a mere rational consideration is insufficient. The study must be global from all the structural features of the human being. We are talking about a biographical subject with a holistic conception that pretends to be completed with respect to its components and behavior (Le Grand, 2004).

This study also discusses how that thing which we call 're-humanizing healthcare' goes far beyond the personalized treatment of patients. It involves management policies from hospitals that go from different actions in accompanying patients: such as explaining the course of their illness accompanied with therapeutic actions –music therapy–, to designing sanitary spaces considering the perspective of the patients. Likewise, in order to achieve this re-humanization of healthcare, it is necessary to undertake a reform of medical curricula aimed at ensuring that curricular designs and subjects provide the essential intellectual tools to health professionals –ethical, psychological, cultural, philosophical, etc.– to be able to ensure this re-humanization.

Finally, this paper analyzes architectural scenarios that pointed to a new model of urban management, where the 'transhumanist subject' can freely and democratically interact with the public space, becoming, in addition to be a user, a manager of its infrastructures. Making decisions about them directly, without intermediaries. Likewise, it is about transferring the responsibility to a citizenship that, being more informed, will contribute, not only to reduce energy consumption, but also to improve the quality of its habitable environments. By exploring new relationships between the public and the private, this citizenship will discover new possibilities in the use of the urban space, which is less regulated and, therefore, hopeful.

5. Research Methods

The procedure used responds to the general methodology used in the humanistic theoretical investigations: a study of the state of the question and a comparative procedure between two successive synchronic cuts –the current and the previous century. Regarding the access to the subject, we decided to go with the biographical method (Dilthey, 1978; Le Grand, 2004) that allows the necessary interdisciplinarity to study health and space.

The method of analysis is based on the evaluation of different parameters –clinical, psychological, ethical, architectural, therapeutic, etc.– which are considered to re-humanize the healthcare system, pointing out several measures that can be implemented in order to achieve this goal (Sacristán, 2018). Likewise, transversal measures are proposed to provide Health Sciences students with the necessary tools ensuring that, the very moment they join the healthcare system, their clinical actions point towards the same direction.

In the urban realm, the analysis is rooted in the evaluation of the energetic, economic, and social costs of the current deterioration of the built environment in order to detect other more sensitive ways of acting. It advocates saving systems associated with preserving a minimum level of order without loss of information and therefore reducing the pressure of our cities on the natural environment. At the same time, it is about triggering a change of mindset towards the concept of 'development'. Once it is no longer associated with the idea of growth, it could be perceived as an opportunity not only to save material and energy resources, but also to achieve higher levels of comfort, health, social cohesion, transparency and intellectual, sensorial stimuli in our 'transhuman' environments.

6. Findings

The common thread in this study is the pedagogical element. It is a concept of 'identity' applicable to the constructive process, both of the subject and of the context in which it is framed (Demazière and Duber, 1997). Education is understood in a global sense that places the individual at the center of a multidisciplinary training process and recognizes pedagogy for each of the fundamentals that make the human being. Beginning with the biographic subject of the 20th century, the first sociological reflections for the 21st century incorporate the dimension of virtual spaces. The possibility of accessing to the media as a platform for social projection has transformed their self-recognition and their way of presenting and relating. Klein (2004) states that the social fragmentation of the person leads him/her to search for his/her

own ways of identity. The personal pages provide a space for the comprehension of the modern individual through new narrative procedures. In addition, relationships are established between people who voluntarily introduce a virtual profile that identifies them. Here, the method of self-presentation is a 'metaphorization', the transformation of a public space into a human one, inhabited and visited, based on visual and sound resources. According to Müller (2004), it is necessary to evaluate the individual of the 21st century through criteria of rationality, sensitivity, aesthetics and psycho-affectivity and related to their virtual learning. The construction of identities responds to an idealization process. Piccione (2017) and De Cicco, Aquilani, & Di Luca (2017) have described the autobiographical and biographical narration from a psycho-pedagogical scope that goes from childhood to higher education. They affirm that it is necessary to address the processes of identification of the person in formation from the two realities in which, currently, digital natives coexist in a 'real' way: the 'analog reality' and the 'virtual reality'. And this is because, in both of them, there are equally necessary and present the philosophy, a worldview, a theodicy, a pedagogy for health and one for the appropriation of their habitats, as we see below.

Nowadays, a number of public administrations –everyhwere in the Western hemisphere– are using multiple resources to try to provide healthcare with greater humanization from a holistic perspective. It seeks to transform hospital spaces by offering patient and users of the health system, including professionals –social workers, etc.– and accompanying measures –mediators, entertainment activities that, at the same time, are therapeutic. However, the curricula of the many University Degrees linked to Health Sciences do not correspond to this reality as they have not been updated yet. In this sense, measures are crucial to train doctors to reinforce their humanistic vocation and not only their technical and scientific profile. In the era of the post-truth and 'transhumanism' that we are living in it is essential to impregnate the students with the humanist principles that, since ancient times, have enlightened the path of their acts. This, to the point that, just like José de Letamendi, classic of the aphorism said: "the doctor that only knows about medicine, does not even know about medicine". Thus, it is necessary for health professionals to acquire two types of knowledge subjects throughout their Degree. On the one hand, a knowledge that helps them understand the environment in which they practice their profession: political, sociological, psychological, etc. And, on the other hand, a knowledge that contribute to redefine the humanistic foundation of their profession: ethics, culture, philosophy and other scientific knowledge helping them contextualize the interest of research fields within their respective disciplines. In order to achieve this, two actions are proposed. First: to include, in the first year of the Degree in Health Sciences, courses of general knowledge that every professional should join to assure a correct development of their future careers. Secondly: to offer lifelong training courses to update the skills that will help them impregnate this essential humanization with their daily activities – ethics, psychology, mediation, etc. All this should contribute to the fact that, together with the new advantages offered –the use of big data, genomic sequencing and other advances in research– healthcare will be focused on the patient, who is both subject and object of it.

Finally, in the realm of architectural an urban space, it must be remarked that currently, through the citizen's appropriation of the most widespread ICTs, this can begin to generate valuable information. For example, having a series of sensors linked to the mobile phone as unquestionable 'transhumant' prosthesis, it is already possible to be part of a network of changing data generated by the users themselves. In their daily actions, they map the city in real time through multiple analog and digital records. The information

provided by citizens should be returned –amplified by the sum of data supplied by every person using the same system in the network– to generate a complete real time operational cartography of their environment. This could include data on air composition (pollen alerts, air pollution), lighting or noise levels, climate warnings, pedestrian or vehicle movement, including cultural events and all sorts of alerts. Thus, the citizen could navigate through this 'augmented reality' by taking decisions in a kind of post-production of information, acting for the benefit of their environment, in a similar way to how the 'semionaut' artist of Bourriaud (2004) behaves. At present, numerous companies and research centers, including the Senseable City Laboratory directed by Carlo Ratti at the Massachusetts Institute of Technology (MIT), develop critical real-time cities that study and predict how ICTs are changing the way citizens describe their urban habitat, get involved in its design and contribute to improve it.

7. Conclusion

We have seen how the different approaches of the 21st century (with the modifications that we have analyzed, particularly the generalized incorporation of technology to the daily human life) appear to have transformed the concept of the person and its relationships. The conclusions could be specifically established both for the field of health, and for a pedagogy related to space.

It is urgent to take specific actions to update the humanistic and humanizing profile of health professionals, both at the level of health policies and formal training of Health Sciences students. It is also paramount that the personalized and precision medicine that comes from a technical and scientific point of view also focuses on a more humanist-intellectual-formative profile.

In this scenario of immediate future, where the responsible participation of the citizenship suggests a new concept of urban space, it is important to emphasize the pedagogical dimension of a series of architectural projects. These affect the massive field of opportunities that intervening in the current deterioration of the intangible flows provides. Their authors demand visibility for processes that are usually hidden despite playing a decisive role in the definition and transformation of public space. For example, Philippe Rham's meteorological experiences call attention to the effects that the construction industry has on climate change. He does so through a subtle architectural elaboration of the physiological responses of the body to changes in pressure, temperature, altitude or hormonal levels. Another example is The Night Project, by De Retes and BatBA Architects. It tackles the deterioration of the night landscape through the design of a tele-management tool for street lighting that allows citizens to get involved in the regulation of the light intensity of an urban environment. The dynamic consists in the use of a mobile application that, in addition to registering their preferences, informs about the consumption of energy and participation data in real time. It allows users to react with their behavior to any situation at all times (Parra-Martínez, 2014). In these multimedia projects where the 'bio-info-technical factor' has a huge weight, the architects act as 'transhumanist' philosophers, sociologists, biotechnologists (Muntañola, 2001, p. 53), but also as activists of the common culture. They vindicate the appropriation of the city through this 'super-architecture' that offers its users/creators sustainability (political, technological and social), "dialogical-intersubjective quality" and, therefore, a greater freedom (Muntañola, 2001, p. 55).

Acknowledgments

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