Techno-Architecture and Online Loneliness

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The information revolution of the late 20th century has modified social existence in space and time, transforming our relationship with the city and our nearest environments, including dwellings, offices and spaces of entertainment. The traditional boundaries of internal/external, public/private, man/woman and work/leisure dualities are becoming less clear and tend to disappear within a reality that is simultaneously material and informational.

This also affects the generation of data, information and knowledge, in a process of continuous work in progress, or knowledge in 'permanent beta', as José Pérez de Lama calls it.[1] Our time is characterized by the emergence of new desires and capabilities based on new relationships and agencies between machines and people. That is why today we can talk about *techno-persons*,[2] and even *techno-animals* and *techno-vegetables*. In fact, the techno-body hybridization affects not only human beings, as Donna Haraway already argued when talking about cyborgs,[3] but every living being in general. Today we can distinguish between life and life on-line (on-life or techno-life),[4] understanding the latter as a set of processes and technological, informational and digital interrelations between diverse entities. These processes are developed in the *third environment*,[5] that is, in a new techno-social space-time superimposed on the biosphere (*first environment*) and on cities (*second environment*). These new relationships provide some solutions to loneliness in cities, but they also generate new forms of loneliness that affect especially those without access to these informational worlds or, having access, without awareness of who they are while there.

The new collective social space of WWW was firstly made possible by interconnected personal computers on the Internet. It has further been developed through mobile phones and social networks, thanks to a complex network of servers, interconnection software and various computer programs that have transformed the information and human communications, as well as war, finance, politics and everyday life itself. As Remedios Zafra argues,[6] today 'we inhabit screens, not just homes'. This implies a profound transformation of contemporary architecture and the consequent emerging ways of inhabiting and acting.

In order to interpret this great contemporary transformation of human environments, we must distinguish between bodies and techno-bodies, genes and techno-genes, persons and techno-persons and, in general terms, between humans and techno-humans. Since the 1960s, the term cyborg (cybernetic organism) anticipated this profound change. With Haraway,[7] the cyborg condition became an authentic alternative to classical humanism. She questioned the duality between the natural and the artificial, and introduced the hybrid as a new way of being in the world. The status of a woman, for example, changed radically: 'I prefer to be a cyborg than a Goddess', stated Haraway in her cyborg manifesto. In doing so, she also criticized the distinction between gods and humans, which has historically been one of the foundations of patriarchy. We also use post-human expression, something not understood in a temporal sense. As Haraway also elsewhere argues,[8] the posthuman is not a singular, defined individual, but rather one who can 'become' or embody different identities and understand the world from multiple, heterogeneous perspectives. We choose to use the prefix *techno-* instead of *post-* in this contribution because there are no current definitions of post-animals or post-vegetables.

Three decades later, and following the emergence of the informational era, techno-persons take their place side by side with the cyborgs. Personal selves have spread and deployed in informational networks, generating new ways of being a person, thanks to new media and technologies. However, the actual techno-persons have neither limits nor are aware of themselves, because, first of all, they are data systems with their corresponding data architectures. They arise by overlapping the informational layer with the material one, expanding online those people who operate digitally on keyboards and screens. These new ways of being require new architectural forms, possibly hybrid, but in any case capable of reading this contemporary situation in order to create *cyborg architectures* as well as *techno-architectures*, to refer to the current process of hybridization of architectures and technologies on the two sides of the screen.

The social domain's ways have also been transformed through the Internet, thanks to these new relationships between humans and machines, which Peter Sloterdijk called *ontological polygamies*.[9] Today we can talk about the techno-power of the *Air Lords*,[10] but also about new forms of resistance and hacker counterpower, whose development requires new architectural forms, not only spatial but also temporal.

The information revolution has generated person/machine hybrids, not only cyber-organisms. They are material since they have an energetic support, but many of them are not biological entities, although they imitate them. Humanoid robots are good examples of techno-hybridization; but we must not forget other types of hybrids such as literary and cinematographic characters, which are also techno-persons. They are very influential, given their impact on the social and cultural imaginary of the 21st century

(for example, *The Matrix*, *Blade Runner*, and perhaps *Black Mirror* or other hybrid types).

Although computerized humans and humanized robots (as well as AIs) are not physical inhabitants, they coexist in the contemporary informational worlds with many computerized animals and vegetables, starting with the techno-genes and the species generated by synthetic bioengineering. The digital environment has opened new fields of action for the human being, generating online spaces that overlap the physical and tangible world. This new 'digital population' is composed of hybrid entities that are related online. However, right now, this emergent population live in a construction made primarily by systems and software engineers. There is a lack of proper architectural reflection on these possible techno-habitats, so we will attempt to begin in this article.

On-line techno-populations and their techno-dwellings are replacing the Albertian-Miesian ideals of harmony, purity, perfection and nature with those of network organization, decentralization, interchangeability and continuous transformation. These techno-architectural constructions no longer aspire to last for long. The very meaning of time has changed. The modern concept of time is transformed into techno-time, once the arrangement 8/8/8 has been substituted by 24/7. Neither, it is not measured by traditional clocks in days and hours, but by technological systems such as GTS (Global Time System), which converts simultaneously everything that happens everywhere in the world right now, but also what has happened before, since present and past become simple data. Thus, techno-time is not successive, but recursive. The change that this implies is radical. Any event, for example a terrorist attack, continues to happen again and again on the screens. Something

terrible repeated without difference.

The structure of the new human groups existing in the informational layer is based on affinity, not identity. They group together autonomous but remotely connected techno-persons through informational networks, even though they operate far away from each other. This distance is not only spatial, but also temporal. In fact, past techno-persons could be as real as present ones; they can coexist and live actively in the informational layer. Technoscience's promise to recreate missing species, for example elephants turned into mammoths through biogenetic procedures. The difficulty is then to rebuild their habitat, the missing natural environments, not just the fossil-turned species.

From a political point of view, the ideas of identity, hegemony, hierarchy and spectacle are replaced by techno-persons with those of hybridization, plurality, horizontality and performance. Even the buildings for politics, today, are also informational and online: they are techno-politics.

We inhabit simultaneously physical and informational environments. We access them through our techno-bodies equipped with various types of gadgets and technological implementations. Various technoscientific systems - some biological and others informational - have radically transformed the original organic nature of our human body, which was slow and tied to the need of contact, presence and simultaneity. These new symbolic and imaginary references find in devices the material nodes of the digital environment where techno-persons live, whether human or not. Citizen life in informational environments is manifested through online interpersonal relationships that require architectural space and time to become developed.

The screen of those devices is designed 'unipersonally' for

eyes and hands with fingers that type individually, making the body almost invisible through the added value of virtual anonymity. Generically, we can talk about techno-bodies, many of which are not organic, but in any case biocomputer hybrids. We are protagonists of a historical change in terms of both forms of socialization and individualization. The computer interface is individualized, which marks the loneliness of access.

Once online, techno-persons are pure relationships, with no substance. In the first instance, they are data. The owners of the networks, who invade the users' privacy, and sometimes even their intimacy, manage this data. It would seem, then, that in the *third environment* loneliness is not possible. Everything is communication and, basically, domination by those who rule there.

The conditions of access to informational environments are never neutral. They generate different types of techno-persons based on the user's original profiles, but then modified according to the necessities. These profiles and data are recombined again and again by the *Lords of the Networks*, which provide new forms of personification and socialization, of which users are not even aware. That is why we can talk about the deep techno-loneliness of people in the online worlds. Each one is continually related with thousands of other techno-persons, presumed friends, but almost none of them manage to have a relationship with themselves, a proper conscience. Techno-persons cannot confront anyone with their selves; they have the same identity as the one given by those who manage their data, profiles and relationships. They do not have their own mirrors to look at. Online selfies are a clear example of automatic theft of images from the Cloud, where they are stored and available to data managers. Techno-persons are alone in the emergent techno-space; they are at the mercy of their owners.

This loneliness determines the intimate alliance between the machine and the subject or between the subjects through the machine: millions of people connected alone in their own rooms. Today, the connected bodies are usually bodies alone in front of the computer, where each screen is only for one person (although interconnected they constitute a crowd). The remarkable thing is that each body and each person does not know what and how their respective techno-person is on the other side of the screen. Only the software can access them, not the people themselves. This occurs for the simple reason that there is no coexistence or selves in online world, but just continuous data-flows generating new online techno-persons.

For the lone but connected person, everything is different. People are off the screen as cyborgs, but also inside, or better on the *other side* of the screen, where apparently no one is alone, because there is a plethora of friends and contacts. However, in there, there is the peculiarity that they are not organisms or people, but techno-persons and data. In the loneness of the connection, one can have the illusion of a 'return home', that is to say, a return to the self; but in the 'Clouds' there are no subjects, only data. Ontologically, the online worlds are radically different from the material worlds inhabited by organisms.

Through the different portable screens, we are producers and distributors of the data that concern us personally. Meanwhile, they are managed and appropriated by the large informational companies, whose global power is growing, especially since the rise of the social networks. Our interconnected rooms have become controlled and monitored cells, because they now produce valuable data. The multiplicity of communications and relationships does not exclude the isolation of the person, especially in their

relationship with themselves.

The digital media helps to create a new personal domestic environment that can be recalled in every moment and in every place. The homes are then potentially de-territorialized since they are losing their physical boundaries and are facing a structural modification in one of their main meanings: the family.[11] Now an individualistic way of living predominates over the familiar nucleus. In fact, even living in a family context, the new urban digital inhabitants tend to establish more individual relationships (through digital devices) than in the past, creating their personal digital environment that responds just to their own needs, expanding themselves on a larger scale than the home. This behaviour radically affects the architectural environment by introducing diversity instead of homogeneity, flexibility, the sense of occupation and the possibility of identification against the imposed abstractions.

Website pages, especially social ones, are 'furnished' in the same way as homes, expressing what one loves, one wants, one is, and extending one's perception of oneself to the outside. The home-pages (curious, as both the name and the symbol refer to the idea of the house), the e-mail addresses (often indicated as the only address, instead of the house address), together with the profile pages, can represent a 'place' to live, a place to feel at home.[12] Turning anonymous spaces (in this case digital spaces) into something that resembles us and that is pleasing to our peers shows how communication technology can be interpreted, among other things, as a form of 'interior decoration'.[13]

New feelings of domesticity, society, production, leisure and commerce that influence the way of interaction with the urban material sphere are thus generated through the superimposition of the informational layer over the material one. They allow the

creation of a techno-domestic environment that becomes an externalized representation of the self. It transcends its original physical boundaries so to appear outside, in the collective realm, instead of existing only inside a defined and closed environment, such as the private house. In fact, the domestic environment is now understood as a domain, a field or as a mental territory that goes beyond the material, concrete spatial and bodily limits of the house: it is a multidimensional environment, related to the intimate condition of human beings and their need for protection, care, rest, recovery and pleasure.[14] The identity of the space/home is then constantly being redefined, depending on individual necessities and their moment during the day.

Both space and time have been transformed and replaced by the spaces of interconnected flows and a timeless time where present and past merge, replacing accelerated time. The construction of places where social and personal life takes place is no longer relevant, because now the meaning lies in the spatial experience of increasingly immaterial flows.

The relationship between the built environment and architecture is now increasingly distant and peculiar. We continue to appreciate the buildings as constructed realities, as artistic presences in the urban landscape, but we also recognize their inability to dialogue with the present, the relevance of which has to be sought in other practices linked to an emergent everyday life. Techno-time (real time), open broadcasting, participation from different geolocations and its staging can be the new keys to define architecture and generate new public spaces.

The individual's sense of domesticity, once closed on itself, now opens up to a public environment such as the digital one, paving the way for a new definition that exists in the overlap between

the material and informational worlds. This is a domesticity that no longer finds in the city its antagonist, but rather an ally where the spatial offering is potentially greater and where, therefore, it can allow a greater expression of individual personalities hovering between the public and the private sectors. The informational revolution among many social, political, economic and cultural events, led to a progressive reduction in the number of houses and an inevitable rediscovery of the semi-public context. This helps to convert the bedroom into a new multimedia/office living room; the kitchen into an urban expansion through delivery services of all kinds; the living room into a space no longer uniquely defined, yet omnipresent in every urban space, both public and privately owned; the bathroom into a place that rediscovers its own sensuality and its relationship with the body, as well as also being a new extension of the office.

The access to multiple realities, together with the reduction of distances, has meant that personal time is now 'dominated', both in individual daily routines and at the level of social organization, by the myths of mobility and speed. Transport and telecommunications are now two major infrastructures of everyday life; people, ideas, capital, and goods move faster and faster, according to the fundamentalism of the race that seems to be the categorical imperative of development.[15]

This acceleration in the operations of life cannot fail to have important repercussions on the perception of time itself. In fact, in the digital era, time is increasingly perceived as something that compresses or even annihilates space.[16] We try to live faster (by increasing the number of actions per unit of time, or by doing more things in less time), we eat faster, sleep less, and talk less with family members. The spheres of personal life, in fact, are continuously

invaded by distant events, relationships and experiences: they constantly encounter symbolic and cultural worlds that are completely outside their range of action, relating them to the other spheres, even when they are not physically present. This abstraction goes in the dual direction of a dematerialization of experience, since the mediated communication involves a loss of clues and symbolic elements, 'and of its delocalization',[17] in the sense that the physical context of the subject is no longer a constraint and is thus easily bypassed. Hence, different environments could potentially be built in every material context, depending on the moment of the day and on the device that is used in that specific moment; domesticity could be found while commuting to the workplace, work could hit while sitting on the toilet, leisure while working, etc. According to Zygmunt Baumann:

> 'Space is the sediment of the time necessary to cancel it, and when the speed of the movement of capital and information equals the one of the electronic signal, the cancellation of distance is practically instantaneous and space loses its materiality, its capacity to slow down, stop, oppose or otherwise force the movement; all qualities that are normally considered the distinctive features of reality. In this case the place loses its value.'[18]

The speed of displacements has led to a further change in the relationships and ways of living as well as the context, guaranteeing the possibility of being in any place at any time.[19] Human beings are no longer discrete units plugged into the material infrastructure of their contiguous habitat; rather, they are nodes of a global network that supports remote and asynchronous interactions.[20]

The physical and virtual mobility multiplied by the media, however, together with the progressive deterritorialization of space, make it possible to outline the global condition in terms of

a 'geographical promiscuity',[21] or in a condition of impossibility, typically contemporary, of knowing how to indicate the centre of one's life.[22]

The condition of the techno-person is therefore to be constantly in motion, from home to work, from one building to another, in the web. The contemporary individual becomes the *parasite* of Derrida, the *nomads* of Deleuze and Guattari or the *hobo* of Lyotard.[23] The individual of the 21st century is a *mestizo* model with many identities and multiple belongings. It often believes that can choose certain life strategies according to its values and beliefs, which are changing throughout its existence. This characteristic of being a flexible individual enables it to adapt without problems to the changing circumstances.

This leads the citizen to a condition in which it is impossible to recognize oneself in a single, uniquely defined place. In fact, the inhabitants of the contemporary city live in the condition that Bart Verschaffel has called 'a-topia': the human being becomes a nomadic subject freed from the concept of belonging and, therefore, is in a state of perennial transit.[24] With this new figure, the concepts of interior and exterior are transformed, and which need to be extended beyond life within the private property into the public sphere of the city.

This condition of perpetual transition, of interstitial situations, has modified and recombined the spaces of everyday life. Georges Teyssot's concept of *Threshold* can be juxtaposed with Homi K. Bhabha's *Third Space*.[25] *The Third Space* is a situation of passage, exchange, and contamination, and is in continuous negotiation. These are spaces of the self, of waiting, of meeting, of temporary, and of absence, closed, open, semi-public, hybrid spaces, etc., in which diasporic, nomadic subjects act and move.[26] There are also

spaces that respond more directly and appropriately to a different idea of living in the porous space of the post-identity city, flexible, inclusive, augmented, open to continuous exchange and interaction between cultures, spaces necessary to cope with all those requests that the social and cultural changes of the 21st century are slowly shaping.

In informational techno-worlds, there is no single way of reconciliation between the online world and the offline one, but there is great potential for critical and creative experimentation. Currently, multiple emerging processes are taking place; they participate in the spatiality of flows, network organization, configuring new dwellings and structures that, at first, try to arise against global capitalism. They are, as José Pérez de Lama calls them,[27] the geographies of the multitude with variable and liquid geometries that propose world transformation machines. They operate, for example, as the construction and diffusion of a meme; a symbolic virus that reproduces, contaminates, and modifies the DNA of the individual imaginary of the cyborgs and the techno-persons.

The informational turn that has been taking place since the 90s has meant a radical change not only in the conceptualization of information, in its uses and possibilities, but also in the way of being, acting and relating in the world. The turn that preceded it, the computational one, involved the technification of information, making it magnitude and entity, that is, something to quantify. Among the peculiarities that define the information since the development of the World Wide Web, on the contrary, there is a shift towards the qualitative: information today is also architecture.

The computerization of life and human relationships consists largely of the quantification of qualitative characteristics of

information. This puts us in a context of meta-information or big data, where the technical, promising and progressive halo of computational sciences has been replaced by a hustle, salvific, innovative and omnipresent halo. The technical advance is no longer as relevant as in the past. In fact, the engineering innovation of the 80s differs very little from the current one. However, the innovative uses of information technology and communication have led to new social technologies, and with them, new forms of relational and personal solutions that could make us techno-persons. Precisely because the informational turn is to take advantage of the qualitative characteristics of the information, it also modifies the qualitative characteristics of the informational relationships. Therefore, it is increasingly difficult to distinguish the digital from the analogue, the online from the offline. In this indeterminacy is life *onlife*.[28]

The digitalization of the current forms of life and relationships leads us to three relevant issues: the resignification of the identity of spaces, the redefinition of practices, and the deconstruction of identities at both the individual and collective levels. The first of these issues is the result of the delocalization of spaces, which implies the possibility of their infinite reproducibility. This means a resignification of the identity of the spaces that, in turn, can increase their polysemies.

The computerization of space implies its de-spatialization, i.e. it ceases to be defined in terms of distance. In the same way, the computerization of time defines techno-time in terms of coexistence and not of succession. Both the de-spatialization of space and the timelessness of time multiply both magnitudes, although always within the limits of the building code. Thus, the techno-world is, above all, a linguistic world, a data architecture.

The loss of subjective identity has to do with experience. These experiential characteristics make up what we have called the life of techno-persons.[29] This way of life changes the meaning of space and time. There are no clear boundaries between 'here' and 'tomorrow', between 'there' and 'now', between 'there' and 'yesterday' …. The coordinates of loneliness today are not clear because the onlife consists of inhabiting time in instead of being time. In the onlife we are not defined (or delimited or determined) by time. The *onlife* existence is not a temporary existence: we do not build time; we inhabit it. Now, inhabiting time means spatializing it. That is why architecture today must be thought of as the architecture of time, because there is an urgency to create virtual spaces, that is, spaces of time or spaces for time.

The computerization of time and its consequent delocalized spatialization implies the need to (re)build (cyber)spaces. Architecture is no longer the result of the search for 'a plan for the spirit'.[30] The spirit unfolds today in its natural place, the air. Architecture has to build times for society and loneliness, spaces for techno-society and techno-loneliness. It is about living *onlife*.

Notes

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