Innovative technologies and living spaces; Updated living standards according to the evolution of homo sapiens

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Abstract

Homosapiens is the common family name for contemporary human beings. There are different kinds of homo species but the most recent one with the most improved abilities are human beings of the present era, who have adapted themselves to the new technologies and life conditions by improving themselves. The substantial improvements in technology started with the French Revolution in 1799. Initially, technology helped human beings in the production and industry sectors. Thereafter, in the 1990s, technology penetrated living spaces, firstly helping with household duties and then impacting social life, first with the radio and later with the television. Living spaces started to change through the organisation of spaces, and most houses were organised according to location reserved for the television. This is the biggest change brought about by technology in living spaces. The expectations of human beings were on the rise simultaneously with economic welfare and consumption-based demands. In the 2000s, phyisical limitations occurred, while expectations increased even more. These were constraints over time, materials and economy, and the solution came from technology via virtual reality and generated cyber spaces, which were without limits, economical and surpassed the built environments. Due to the lack of physical conditions, built envionments ceded their place to virtual living spaces and virtual cities. In the present study, data collection was undertaken via a study of innovations within living spaces and also via an observation of social lives within living spaces. The present article aims to present what can be foreseen, on the basis of cause and effect, concerning the impacts of the current evolution on the one hand and massive outbreaks of viruses on the other hand, the impacts on the physical spaces of the homosapiens species that have succeeded in adapting to all the changes that they have come across from their beginnings until the present era, the impacts that both phenomena will have on the current living standards and living spaces of humans and what changes human living spaces will undergo in the ongoing process of evolution. Human beings will continue renewing themselves throughout the said phenomena before concluding their process of evolution.

Keywords: Innovative, technology, living spaces, living standards, homosapiens.

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1. Introduction

When one speaks of humanity, one has in mind the contemporary life of humankind, as well as its recent past. Should one inquire as to the beginnings of the humanity, one is faced with the facts that indicate a 200,000-year-old past [3]. The humankind is named in literature as 'Homo', to which appellations are further added, representing the ages as per which the humankind is categorised. Homo, i.e. the humankind, can be further defined as various species that were given various names according to their physical characteristics and according to their geographic locations since the very beginning of humanity's existence. While some of these different species eventually concluded their cycle of existence, some others were ignored by other human species on the basis of superiority of the latter, and thus condemned to disappearance.
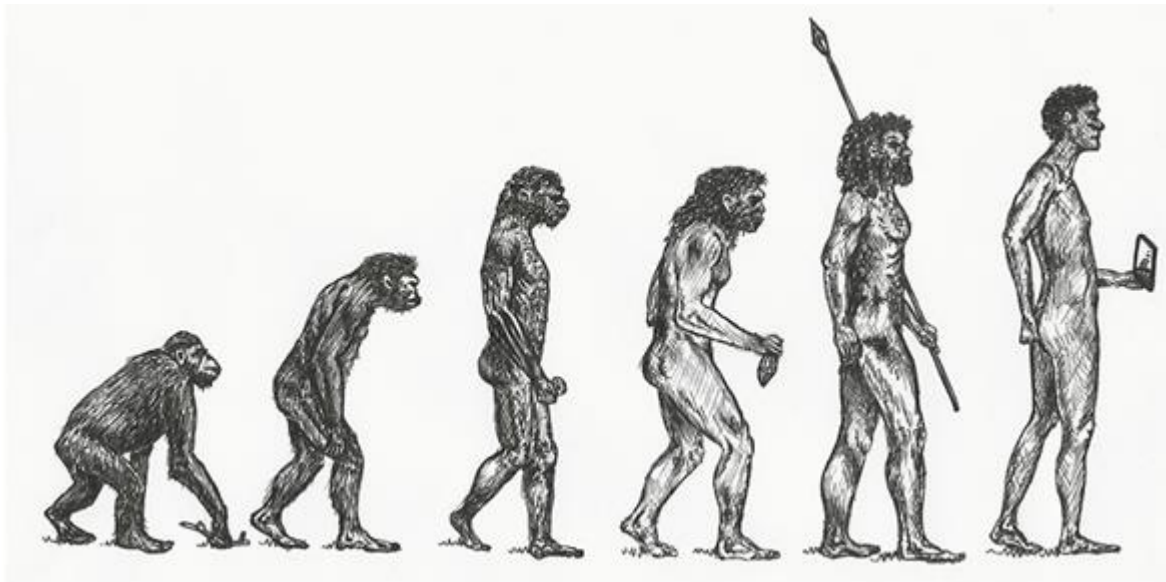
Figure 1. Cycle of evolution of 'Homo Sapiens'

The 'contemporary human', named as 'homo sapiens', was the first species to adopt a settled way of life, to identify with and assume ownership of their adopted environment and the only species that managed to adapt to their environment. This is why this homo species has a history, a cultural past and a relationship with their surroundings and lives in communities and carries out communications, interactions and exchanges within their species. It is an undisputable fact that the extinction of the species is part of the evolution. Various hypotheses that aimed at explaining the extinction of species are yet to be clarified. The only known fact is that 'homosapiens' rose to the top ranks of the food chain. Even though this cannot quite be explained, some reasons may be proposed, such as volcanic eruptions, inability to compete for food and to adapt to changes in climate conditions.

Thousands of centuries ago, Homosapiens emigrated from the African continent and started settling in Europe and Asia. Having overcome many hardships, they discovered new places of habitation and settled down. Population genome studies point to the African continent as being the region with the lowest number of differences in genetic variants [31]. With the evolution of languages 50,000 years ago, they learned to establish communication, make plans and act in groups. Saturation of food sources can be presumed to have been the principal cause of their migration [21]. It would be valid to state that human species hence moved towards new spaces, new environments and new habitats in line with their needs.

As they settled down in geographies with cooler climates, humans invented fire and started using it to warm themselves up, and started making clothing out of leather in order to keep themselves warm.

Solutions and methods were developed in response to their needs. They started meeting their alimentary needs by hunting, using the tools that they invented. With animal species going extinct and humans leaving behind their nomadic way of life in favour of semi-settled and settled ways of life, they started using various natural resources in order to meet their different needs. Extinction of various animal species brought about animal husbandry, as well as the use of stones, soil and tree branches as materials with which they built shelters with the help of the tools they created in order to give the desired shape to these materials. They started farming in an effort to meet their agricultural needs, hence creating sources of alimentation. It can hence be concluded that early human species that were not able to discover their surroundings and lived in restrained areas, started foraying once faced with nutritional needs of an increasing population and as a result they discovered how to cultivate the land and started taming animals [13]. Thus, all things started developing in light of needs and via the notion of demand and supply.

With the demand and supply rising in this manner, much like a trend crossing the history of humankind, the industrialised world kept changing continuously and creating solutions that supported faster and cheaper means of producing higher quality in an effort to meet this ever-rising demand. Therefore, technology that entered human life via an initial stage as a means of meeting needs and that, in the later stages lead to developments which augmented human welfare, holds a particular place in the contemporary structure of the world, whereby it has a serious impact on social life. Social and cultural effects of globalisation are explained by the term 'consumption culture' [17].

With the planet being covered by more and more human-made structures, the world of construction went through changes following technological developments, whereby there is a particular trend towards building uniform type of structures all over the world, based on the use of same materials. Globalisation brought about the availability of all construction materials in all countries at affordable prices, thus leading to these materials being preferred. The same effect of globalisation is also currently being experienced within the domain of interior design, whereby manners and customs are being disfavoured and regional cultures are being forgotten in favour of homogeneous interior design trends that are based on technological innovations.

Technology is taking up an ever-growing part of human life with an ever-growing impact thereupon; this impact is changing the social life of humans, resulting in spaces that are being reshaped in line with these social changes. The fact that technology has such an impact on human life and that it is able to respond daily to the demand and supply via innovations is creating an endless ocean of possibilities for the consumer society. The speed at which contemporary human societies are characterised with a forte of easily consuming and liquidating anything, yet harnessing a weak purchasing power, are also faced with technological developments and innovations, leading inevitably to the emergence of virtual spaces and new short-lived fads with all being demanded due to the lower speed at which the purchasing power is growing. Hence, given a way of life where all can be presumed to transpire in virtual environments, it is inevitable to state that there is a move towards a life of spaces without places and where the sense of belonging felt for places is being lost.

2. Methodology

The present article is based on qualitative field research methods, whereby human life styles and migratory processes from past to the present, their adoption of a settled life style, their adaptation to technological developments, as well as the impact of the said phenomena on human life, are researched in depth with data being collected and focusing on points in time where changes occurred. Changes experienced in the past were studied in the light of the obtained data and their impact was discerned through technology. Collected sources and data obtained in line with these sources were compared with changes which occurred in the recent past and which are currently occurring and on which data was obtained through observation, thereby leading to previsions.

Data with an impact lasting from the past until present establish examples and sources which when coupled with technological developments result in previsions emerging from the undertaken studies, facilitating a proposal of ideas as to what the future holds for human living spaces.

3. Humans and Spaces from the historical perspective

From the historical perspective, rising needs and expectations had brought about the Industrial Revolution. The Industrial Revolution is the point of transition from production based on human and animal power to that powered by machinery. The Industrial Revolution is accepted to be a turning point in the history of humankind, whereby the way of life changed drastically in the Western societies; this is the first ever occurrence in human history of a concomitant rise in living standards and in population. This was rapidly followed by more machine power, more raw materials, more produced goods, more waste, more transportation, more consumers to purchase goods born of commercial and industrial processes, more sales people and large companies with large capital employing more people. Older and less complex means of production yielded factory production that brought about products with lower prices and higher quality.

Following agricultural and industrial systems, it was the 'services' sector that was impacted next by the Industrial Revolution, whereby undertakings aimed at improving the welfare of the human kindwere brought about. It was realised as a fact, put to good use, that machine power was more beneficial in augmenting the welfare of humans and more advantegous than the labour force that initially opposed the adoption of machine power. As the sectors of production developed, i.e. agricultural and industial, financial conditions and welfare were being improved, whilst the population which was made abundant by mechanisation and automatisation was being employed in the services sector, thus bringing about social security and better conditions of living, work, education, health, recreation and rest; in other words, facilitating social and cultural progress.

In times characterised by low cultural expectations, low societal stakes and a weakened sense of identification with the society, a new discourse came about, that of globalisation. Globalisation facilitated a transition to an era where, with the Industrial Revolution, cultural influences were ignored, expectations were equalised the world over, the same style of structures were constructed with the same processes around the entire world and buildings with the same design, from the same colour of glass to the same colour of wall paint, were prevalent all over the world. This transition to a commonplace type in construction, life-style and preferences, and transition to the 'uniform profile' of human was felt in every aspect of life. Dissociating itself from cultural values, the humankind commenced a phase characterised by adjectives, such as homogeneous and plain, and where individuals resemble each other, a stage marked by the dying out of polyphony.

It is a scientifically proven fact that the adaptabilty of individuals to their environment and their sense of belonging felt for places enables the establishment of good relationships and a more succesful life. McMillan and Chavis stated that the adaptation of individuals to places may facilitate the development of a strong sense of belonging which in turn enables individuals to meet their needs [22].

The sense of belonging was initially defined by Hagerty, Sauer, Pattusky, Baouwsema and Collier as a feeling by individuals of being an indissociable part of the environment or of the system, whereby their lives contribute to the system or to the environment. In a later definition, they describe the sense of belonging as the feeling of being valuable or significant, which the individual gets by living in an environment which is compatible with their ego [11].

Human beings develop a sense of belonging in relation to the environment and places where they live. The sense of belonging felt by homosapiens, as well as their cultural past, goes back centuries in the history of humanity. Wars are ongoing in order to protect cultures and sources of life. The root cause of many wars is the refusal of humans to share geographical territories based on their geographical locations which they own.

This refusal, in turn, is based on their desire to defend the geographical location which they feel that they belong to.

Humans experience a sense of belonging in relation to their families, their homes and the cities in which they live. Changing the place where one lives and moving to another place is usually difficult due to the sense of belonging, or requires going through a stage of adaptation. This is why human beings lead a happier, more peaceful and more success-ridden life in places where they have a sense of belonging.

In the current era, particularly by the end of 20th century and the beginning of 21st century, technology permeated human lives due to the rapid post-Industrial Revolution technological evolutions. These modern societies which concluded their stage of industrialisation and commenced a new era through technological revolution named the current era as the age of electronics, the age of cybernetics, the age of superior technology or the age of information. Toffler analyses the evolution of societies through three main stages, which are the agricultural period, the industrial period and the current one, i.e. the age of information. It was observed that the age of information brought new dimensions to the relationship between time and spaces which can be deemed to have been inflexible during the Industrial period. Those technological developments that directly impacted the individual life and communal life have also manifested themselves in the domains of city and spaces [32].

As the Industrial Revolution had brought about profound changes in lives of individuals and societies, so is the Information Age directly impacting the lives of individuals and societies. Individuals with heterogenous production and consumption patterns, who lived with their nucleus family in housing estates and worked in factories during the Industrial Revolution, are replaced in the Information Age by individuals who work in offices, communicate and access information via computers and who meet others and socialise in virtual spaces through computers. In other words, not only is mechanisation on the rise in the domain of production but also methods of production are changing, all due to an increase in scientific studies. Humans are now in charge of the design of factory machinery, evaluation of production methods and financial evaluation and marketing of products, rather than solely being in charge of operating machinery in factories. Technological evolutions that are changing lives of humans are also taking a leading role in shaping spaces.

In contemporary towns, where the emphasis is on individual life, spaces are smaller and are differently shaped due to technology-rich equipments which are smaller in size despite the evolution in their functionalities. Separated as a result of the Industrial Revolution, work spaces and residential spaces are being united once again due to changes occurring in production and communication technologies. Projects that were designed on computers are being utilised via virtual environments to operate machinery located at a distance and to get the production process started with that machinery. This configuration requires work spaces to be accessible from any given place, at any given time or for the same to be mobile and to be transported by users.

4. Evolution in the design of spaces

In the current period, whereby spaces are more and more void of places, it is inevitable to get detached from real life. Humans have to face the fact that residential spaces are gradually triggering less and less of a sense of belonging and that any space equipped with technology is beginning to give the same feeling as living spaces and beginning to be utilised as living spaces. It is a fact that technology creates a virtual space and that each individual exists in that virtual space assuming various roles, where by there arises in individuals a sense of belonging felt for the virtual space. This brings about the question of what happens to real spaces in which individuals live.

Spaces in which humans resided in reality initially lost their identities and became common places as a result of globalisation, thereby diminishing the sense of belonging felt by their habitants. These residential spaces then lost entirely their significance with the emergence of virtual spaces.

By thus getting further away from the sense of belonging, human beings are getting ever more alienated from the 'homo sapiens' species which had environmental ties, had respect for their history, identified with their place of residence and their environment, had strong family ties and who were capable of undertaking struggles and attaining success together with their community. In fact, human beings are embarking on a search for a new human species as dictated by technology. The fact that becomes very much salient at this point is that the evolution of human beings is not yet complete and that the universe is looking for a new species.

The 'pattern language' work undertaken in the 1960s by Christopher Alexander, whereby it was put forth that end users had an active role in design, may be accepted to be a precursor of the currently occurring changes. According to Alexander, every design must have distinct patterns defined for each scale, i.e. for an array of scales ranging from city to interior spaces, and design must develop within defined drawing patterns. In addition to these points, the user was another factor that was taken into consideration by Alexander when emphasising on diversity as well as demand and supply [2].

Developed at present, the concept of mass production dates back to the 1960s with the basis for it being referred to as the mass production initiated by Ford. This concept engendered approaches that lead to the standardisation of not only principal materials used in spaces but also design objects, while also leading to a loss of diversity.

Therefore, it can be said that the point of view where in demand shapes architectural design and brings forth user demand, as mentioned by Alexander within the context of the 'pattern language', is presently accorded much credit taking into consideration the conditions of the current period.

In the mid 20th century, Le Corbusier likened living spaces to machinery, generating concepts such as free design of ground plan and of facades in the context of flexibility and changeability, wherein concepts are being further developed currently. With developing technology being coupled to spreading new ways of life, it became feasible to change the location of or to renew entire spaces or to do the same for changeable parts of spaces [4].

Active in the current period, Dural mentions 'adaptability to different needs under changing conditions', i.e. the process whereby living spaces and furniture can easily undergo changes due to the changing needs without any losses occurring, which can be named as 'flexibility in design' [6]. Flexibility in design is generated by the changeability of spaces and by their quality of being flexible. The basis for this is that the non stationary relationship between design products and needs remains balanced due to possible changes over time. Prolongation of functional lives of spaces and durability of the equilibrium between designed spaces and unpredictable behavioural changes are what are aimed at in this regard. Tapan defines the concept of flexibility as the capability of a given design unit to satisfy different user needs without changing the construction system and the possibility of profiting from the same volume for facilitating more than one function [30].

The changing conditions of life in societies, changes in family structure, needs and demands of users changing over time and spaces shrinking due to rapidly rising population are all factors contributing to how residential interior spaces are shaped. Multi-functional utilisation of spaces and reinforcement elements have become wide spread practices aimed at meeting the changing demands of end users. The opposing approach, i.e. designs which do not allow for changeability and flexibility, is not able to meet the needs of societies that are changing and developing rapidly, and the end of functional life comes much sooner than the end of physical life cycle for such designs. Hence, designing spaces and reinforcements therein in such a manner as to provide enough flexibility for the spaces and furnitures to be adaptable to new conditions is prolonging the life cycle of spaces and reinforcements [26].

5. Current evolution of technology and spaces

At the beginning of 21st century, it became salient that technology was prevailing in every aspect of living spaces and that it obtained a certain place within the services sector. As a sector, technology took the form of a rising trend and, coupled with globalisation, turned the consumer society into a wide-spread structure: a structure that goes beyond sheer supply and demand. From the materials used to the designs created, all are being prepared in answer to whatever globalisation dictates; to which end, cultural and sociological influences are being erased and traditional spaces rendered distant concepts. As bearers of hunter–gatherer identity, 'homo sapiens' was the first human species ever to adopt a settled way of life with living spaces made up of a single room and closed, semi-open and open spaces, where all functions co-existed. As can be seen in Figure 2, they lived in communities with limited closed spaces at their disposal.

Figure 2. Hunter–gatherer humans living a settled way of life [15]

At present, there is a diverse functional allocation within living spaces as a result of changing social life and economic conditions. Initially, change occurred in living spaces housing principal functions; as needs increased so did these spaces, which become diversified, and their designs started changing. As Williams mentioned, television was invented as a result of scientific and technological research. The power of television as a device of social communication was so great that it reshaped social relationships and changed most traditions [36]. Together with the changing forms of social relationships and traditions, it was the manner in which homes were organised that changed, as well as the functional design diagrams, which were accepted as a device of socialisation, television-reshaped living rooms and even bedrooms.

After the impact of television on living spaces, it was the increasing work load and insufficient working hours that lead to many living spaces being designed in a manner that would include working quarters, whereby a period marked with the penetration of professional life into living spaces started. As a result of the rise in economic demand fuelled by humans earning more and mastering greater purchasing power, professional life and living spaces started to integrate in sociological and design aspects.

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Figure 3. Home office in the 1970s [14]

The most significant spaces reserved for living functions are homes, where cultural, economical and, most recently, technological values of societies are shared. Used as a means of displaying power and superiority and an element of social marginalisation, these spaces house various functions and lead to large scale constructions being built accordingly. As a case in point, these houses where socialisation spaces such as sports halls, swimming pools and cinemas are included are among residential functions. Naturally, such houses are accepted as an indication of economic status and it must be pointed out that such houses with all the said functions do not generally exist among structures of socities.

As developments progressed, the boundaries between social and economic life became flimsy, whilst developed technology and software applications opened the doors of a new social life to human beings. Defined as an added value brought about by the Information Age, virtual social life started enabling individuals' presence in three to four or even more spaces concomitantly whereby they can socialise in different domains. Naturally, although it is being disputed to what extent such socialisation is sane, the utilisation of such network of socialisation that is much demanded by human beings is increasing daily.

The setting of a house, which is the social life space for humans, is ever changing. It can be said that the social changes that started with the television, which continued with the inclusion of

economic/work life in living spaces and finally via the virtual social spaces created by technology, enabled humans to be present in multiple virtual spaces at the same time; a house is currently a very different environment. It is a known fact that virtual social space is an adequate space of social life that does not require any physical places. Therefore, it can be validly stated that human beings are capable of finding social and psychological satisfaction in virtual spaces without feeling any need for physical structures.

The society of consumption, particularly well-off parts there of, has a current life style marked with rapid generation of consumption, realisation of trendy designs within living spaces, mixing of work and living spaces via flexible spaces and creation of new spaces using newly emerging products and materials. As mentioned by Kiper, structures being created through similar designs, with the same construction technologies and same materials of construction, hence in a way, prototype constructions, are leading to an assimilation of cities all over the world, 'bringing them closer' whilst destroying identities of towns that were marked by local authentic features [18]. In other words, all structures, small as well as large in scale, are being impacted by globilisation. As a part of globalisation, it is naturally inevitable for different societies as well as individuals with different economic statuses to be in direct or indirect communication among themselves. There is hence a desire among societies marked by consumption to oberve each other and to adopt similar standards of living; however, not being equipped with the same living conditions and the same economy does not appear to be feasible for them to create the same opportunities and to adopt the same way of life under their given physical conditions.

Thousands of years of evolution undergone by the humankind, as well as their success in survival by adapting to all conditions, is currently ongoing. A human being is at present living in a world where spaces are even more devoid of places and where, from an economical perspective, physical conditions are no longer beneficial for all strata of society. It is at this exact conjencture that what is accepted as one of the biggest technological developments, the virtual world, comes to the rescue, providing sociological and economical satisfaction for humankind. Expectations generated by psychological and society-based needs are leading up to different patterns of media utilisation on mass communication devices and to other activities, which are all facilitating the satisfaction of needs [33]. Surely, this is being further supported by the daily growth of technological developments. At present, it is possible to meet with any desired person through virtual spaces, whilst one is dressed as desired and whilst one is physically present in any desired residential space; in fact, this can even be carried out in two to three different virtual spaces at the same time. Human beings are faced with a virtual world where physical spaces have lost their significance, where the sense of belonging experienced in relation to living spaces, streets and countries is weakened, where the speed of consumption is on the rise and costs are falling. As mentioned by Bayraktar concerning this world called virtual reality, 'virtuality', which is derived from the Latin word 'virtualis', is used to refer to things that do not exist in the real world, yet the presence of these can be felt through some devices and softwares. Bayraktar further explains: 'used in terms such as virtual environment, four-dimensional CAD and interactive 3D, virtual reality is a simulation model that, despite being virtual, facilitates mutual interaction and communication and generates the perception of a life-like presence, all in a computer-generated environment' [5].

Figure 4. Virtual reality environment

McCarthy defines the reason behind the coming to existence of virtual spaces as, 'Reality has always been too small for human imagination. We are always attempting to surpass it' [28]. It is seen as an entirely new world that will render accessible not only dreams and aims of a human being who is constantly striving to attain more of everything but also all that which is not attainable. This is why a virtual world, free from the physical limits of reality, is very attractive and appealing for humanity. The word virtual is derived from 'virtus' which signifies potential or power; contrary to common belief, it is not the opposite of what is real, it represents the power that is possessed by any given thing which one thinks may become real or not [1].

The virtual world is a world of virtual reality that is provided by technology to humankind in a period where by physical conditions and purchasing power are inadequate and demands by humans for socialisation are not being satisfied. It provides a space where humans can become who they are not in the real world, where they can feel as if they own the physical conditions which in fact they do not own and where they can socialise on two or three different platforms at the same time. The lack of a sense of belonging in virtual spaces and the fact that physical concerns do not develop in virtual spaces, coupled with continuous renewability of virtual spaces, all play a great role in the evolution of human beings descending from homosapiens. Homo sapiens is species of humans adapting to any given environment and conditions, and it can be validly stated that they are in the process of obliging with and adapting to these new conditions. It would not be an incorrect statement to say that, assisted by the evolution and changes that the human being is undergoing, the Virtual World, which is the utmost technological achievement, will bring an end to territorial wars which have been held for centuries and that, by becoming free from places humans will also be freed from the sense of belonging.

As indicated in the introduction of the present article, continuous changes are being experienced rapidly both economically and socially. At the beginning of the year 2020, thousands started to lose their lives due to the outbreak of Covid-19 (Corona) virus which started in December 2019, leading to hundreds of thousands who got infected and suffered from ailments and who are suffering currently. Therefore, governments started placing their borders under protection, with inter-country travel

being prohibited, education at schools as well as all group activities stopped and, most importantly, serious measures such as confinement being undertaken. These measures are aimed at assuring human health and continued existence of humankind.

This episode increased the rapidity of transition to virtual environments and social distancing became inevitable with humans feeling the need to protect and be protected as never experienced before except during times of war. There hence arose the necessity for humans to socialise in virtual environments and for technology to develop sufficiently to adapt to this situation. These measures had the effect of increasing the significance of living spaces, whilst, through advantages generated by technology, the activities that used to be reserved to physical social settings were transferred to virtual settings. Thus, the virtual world that was a space reserved for socialisation turned, in fact, into an obligation. It can be observed through various visuals that the current perception of spaces in our world is that of a background and a screen.

Figure 5. GAU's architecture studio
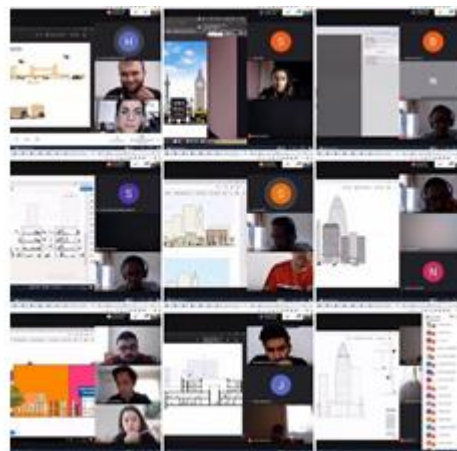

Figure 6. ITU's architecture studio [15]

Figure 7. GAU's Assoc. Prof. Dr. Hossein Sadri (2020) – ARC 301 architectural design studio – google hangout meets software online studio [27]

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Figures 5–7 show the architectural education. In Figure 5, showing the architectural education (Girne American University's Architecture Studio), it can be observed that education is being undertaken through the classic method of education, i.e. formal education. Following the most recent sudden changes in conditions, formal education was stopped, leaving studios empty and education was reshaped, so as to be administered via an online system whereby all can attend courses from home. In this manner, individuals are getting connected to their online work environments from their living spaces.

Figure 8. Turkish government meeting [34]

Figure 9. Metropolitan hotels Taksim [25]

Figure 10. The American University of Cyprus – faculty of fine arts online meeting/ google hangouts meet software

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Figures 8–10 show the transition from traditional methods of meeting, through empty meeting halls, to online meetings. Here it would be valid to state that place-based pressure is reduced and authority is weakened.

Figure 11. Haci mehmet balkan mosque [10]

Figure 12. Haci mehmet balkan mosque interior [9]

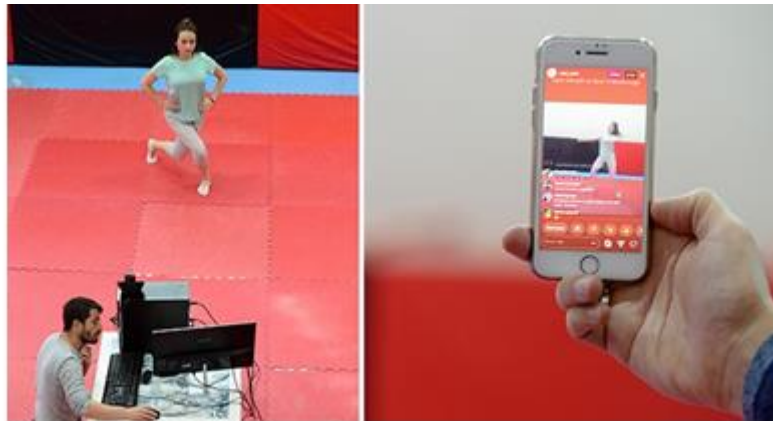**Figure 13. TACEV Waqf (2018), online course on worshipping in congregation – youtube [29]**

It is natural that just as all other group activities were prevented in this stage, so was worshipping in congregations stopped. There hence came about online courses with the theme 'worshipping in congregation' held via virtual settings as well as online virtual solutions for those who would like to worship. As can be seen in Figures 11 and 12, packed mosques are thus turned into empty spaces and worshipping started being practiced from homes via online systems.

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Figure 14. Konya kizilkaya GYM [19]

Figure 15. Konya kizilkaya GYM, empty [20]

Figure 16. Usak Municipality (2020). Online sports at home [35]

In this stage whereby all group activities were prevented, sports halls were also evacuated (Figures 14 and 15), leading to online sports activities that can be followed from home.

Figure 17. Mehmetbey university [23]

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Figure 18. Mehmetbey university's empty conference hall [24]

Figure 19. Online meeting

Conferences requiring *in-situ* gathering were either annulled or held online. Figure 17 shows an *in-situ* conference in a physical space and Figure 18 shows the same hall empty post-conference, and Figure 19 shows an online conference with participants attending from their homes. In this manner, people are capable of attending international conferences and undertaking presentations from their living spaces.

6. Discussions and recommendations

Homo sapiens continue existing as the only human species capable of evolving. This species of humans, despite being of weak bodily constitution, was able to establish superiority *vis-a-vis* many other species and to earn itself a place in the top rank of the 'food chain' in a short period by exploiting their intellect, living in societies and establishing a relationship with their surroundings. The most important element in this achievement was the evolutional capacity and environmental adaptability of the species. The present article exposes the evolution and changes undergone by human beings, explaining through examples how the species adapted to all conditions, favourable and unfavourable, whilst continuing their route through historical stages. The answer to the question of whether the human species 'homo sapiens' will be able to adapt to ever-changing conditions is very

clear; the species is capable of undergoing further evolution in such a manner as to be compatible with its surroundings under any given conditions and to adapt to any development.

Here is how Yohannes Haile-Selassie explains the process of evolution: 'Evolution is a non-stop process; hence human beings, just like all other forms of life on earth, are in the process of evolving and they will continue doing so too. Yet, no one can know for sure what will happen to human beings in the future, except for the fact that eventually they will become extinct. Evolution has internal dynamics of its own and no one can make an accurate guess concerning the issue of human beings' future' [8].

Even though it is not possible to come up with more than suppositions concerning the future of human living spaces with the currently ongoing process, it is nevertheless possible to anticipate it. As a result of the undertaken research, the following can be anticipated:

- Spaces will be free of places and definitions of space will change.
- It is inevitable for virtual spaces to become superior to real physical spaces.
- Personal spaces of individuals will rise in significance whereby a system based on personalisation of spaces will come about.
- Physical spaces will become smaller, their functions will be fewer and the emerging system will be based on single functional spaces.
- With physical spaces diminishing in size, the number of virtual spaces will rise.
- With the number of physical spaces falling, the number of natural living spaces will rise, leading to a change in the ratio of constructions and natural settings on earth.
- Many constructions housing reunions, group work schemes and humans will be deemed unnecessary and will be abolished.
- The Virtual Planet will further develop with holograms and/or Virtual Reality bringing to bear its reflections on the physical Earth.

In summary, the process which commenced with homosapiens species and which has since evolved indicates that there will be further evolutions to be undergone. With the diminishing size of spaces and the transition to single functional spaces, it can be said that humans are justified in returning to single functional spaces as was the case in early ages of humanity. As Harari also stated, 'future aims of humans are not certain and they are as unsatisfied as they have always been despite their extraordinary accomplishments. Humans have gone from canoes through galleys and steamboats to space shuttles, yet it is not known what their final destination will be. They are far stronger than they have ever been, yet they do not know what to do with such power. What is worse is that humans seem to be more irresponsible than they have ever been before. It would seem that they are only respecting the rules of physics and, as self-proclaimed little gods, they are not accountable to anybody for anything. Humans are continuously destroying other animals and the surrounding ecosystem whilst concerning themselves solely with their own comfort and pleasure and without ever being satisfied' [12]. In other words, humans are being punished by nature after centuries of overbuilding, decimating the nature and living a consumption-centred life without any regard for the environment. Regardless of how difficult it is to go back to the past eras, when considered from an evolutionary and historical perspective, humankind is currently seeking unity and solidarity in virtual spaces. Returning to the past will only be feasible through virtual spaces[16].

7. Conclusion

It is evident that homosapiens is the sole human species to be still alive today is no coincidence. Human beings of the current era have evolved having won every struggle thrown at them at every stage of the evolution process and they will continue doing so. Change is in the very nature of human beings; every member of the species is experiencing their share of changes small and large. Destruction brought upon nature by human beings, egotistic life styles and the belief that human beings are the only living creations are phenomena leading to changes that are exacting a punishment

on these very same phenomena. Every change translates into a punishment executing human beings, and every punishment translates into a new life cycle.

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