Being in the Hyper City and the Posthuman Body

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The birth of a technologically dependent built environment, and the collapse of the classical tradition led to the abandonment of interest in the question of the body-buildings analogy.[1] More recently, however, contemporary culture has produced and made available different new technologies.[2] This has redefined the nature of human beings, their bodies, their everyday life and their architectural and urban correlates.[3] With these current transformations, we sense a deliberate urgency to address the body/built environment paradigm, which again raises the issue of the analogy with the body. Throughout this article, the term body is used to describe the unity between the psyche (that is, the self) and flesh. The epidermic surface seals this unity.[4]

This exploratory article, therefore, examines the hyper city/posthuman body paradigm as a possible container of a renewed psychological interpretation of the analogy between bodies and buildings. It requires a self-conscious continuity of the posthuman subject. The self-conscious continuity acknowledges an impossible pragmatic differentiation between physical and digital domains, flesh and machines, to reveal and orient related boundaries. This affects the experience of the built environment, turning posthuman subjects into active rather than passive inhabitants of the hyper city. Both the built environment and its inhabitants have a reciprocal critical role opposite to prescriptive and standardised urbanisations. Such a self-conscious continuity is elaborated through the reading of Bernard Stiegler's work. It is advanced as a precise sign of a radical departure from Gilbert Simondon's classic argument about the organological development of human beings, technological objects and modern culture. In Simondonian theory, the emancipation of technological objects is progressively integrated into modern culture and human beings, making up an ensemble. This would lead to a condition of economic equality rather than its capitalisation.[5] In Stiegler's view, the emphasis is on the process of externalisation through which posthumans exercise their self-consciousness and perform the continuity between physical and digital environments, flesh and machines. The self-consciousness makes possible once more both an individual and communal life through the ethics of community to stand against the systemic power of capitalisation.[6]

For the purposes of this article, the term 'hyper city' essentially expresses the implementation of hyper-reality to existing urban settings.[7] Hyper-reality is a fictional technology that condenses several already available tools such as augmented reality (AR), wearables, and the internet of things.[8] The term 'posthuman' identifies the possible next stage of the human condition, where posthumanism refers to the humanist idea of a city as a projection of a human body.[9] The human body engages in co-production processes with machines and other figures but not necessarily with humans. Simultaneously, the human body experiences its own dematerialisation. Therefore, the differentiation between physical and virtual body becomes obsolete.[10]

To do so, the article is structured into three main sections. The first, 'Hyper urbanism', and the second, 'The age of the posthuman', help readers to comprehend the socio-cultural, historical, and theoretical background of the paradigm. They support the subsequent discussion: 'Reforming the body/city analogy'.

Nevertheless, the first context that is central to understanding a renewed body-buildings analogy is the long history of the analogy. Urban designers and architects adopted the analogy to ensure a certain continuity between the self, its body and the built environment. The origin of the analogy goes back at least to the Ancient Egyptians and the Hindus. The Egyptians introduced a grid of eighteen units that acted as a proportional system to design perfect bodies and buildings, whereas the Hindus wrote the *Vastu Shastra* in which the human body was at the basis of any design and construction (from the scale of a family house to a temple).[11]

The western history of the analogy recorded different interpretations: the metaphorical, the mathematical, and the psychological interpretation. In the Hellenistic period, for instance, a mathematical order with a psychological understanding of the human body shaped buildings and cities. The idea of 'body heat' and related notions of hot and cold identified the generative process of human beings and buildings.[12] The Stoa presented a double-height marble colonnade combining four different orders (one Doric, two Ionic and a Corinthian capital) at the front, and a walled part at the back. The colonnade was conceived as one of the edges of the Agora. There, many activities such as religious dancing, gossiping, and watching jugglers occurred at once (the place for exposure). The walled row of shops (places for dining, doing business without intrusion) were more intimate.[13]

The eclipse of the Hellenistic culture opened the way to the growing power of the Roman Empire. Political ideologies and visual aesthetics underpinned Roman architecture and urbanism. The buildings and cities, therefore, represented order, both political and visual.[14] In the *Ten Books on Architecture*, Vitruvius describes the necessity of harmonious, symmetrical proportions in the design of sacred architecture. These symmetrical proportions were distilled from the geometries of the human body. By adopting these proportions, a relationship between a building, its occupants, and the sacred could be created.[15] The Pantheon, built by Hadrian on the ashes of Marcus Vipsanius Agrippa's temple to all the Great Gods, was an extension of the human body and synthesis of Roman technological achievements.[16]

The Middle Ages were characterised by an abundant production of military architecture such as fortresses. Francesco di Giorgio Martini was the first to provide a comprehensive treatise on military architecture. It covered both the theoretical and practical aspects of this specific architectural domain. Here, the author showed his interest and preoccupations in the analogy between the human body, the military city and its elements. This analogy was the generative principle of urban and architectural forms. Two of his drawings clearly illustrate this: a walled city in the shape of the human body, encircled by towers placed at the elbows and feet; and secondly, a city model at the hand of Dinocrates – Alexander the Great's architect.[17]

Ideologically linked to antiquity, the Renaissance proposed a revival of the classical mathematical analogy between the human body and a work of architecture or the city. However, it was permeated by a Christian belief: man is the image of God. The use of human proportions and its geometries in architecture and urbanism allowed architects and urban designers to translate the divine order into the built environment. For example, architects such as Bramante and Giuliano da San Gallo combined the symbol of the cross with human geometries by using the Greek cross-type of plan, while others such as Francesco Giorgi framed a harmonious and proportional progression that united the microcosm with the macrocosm.[18]

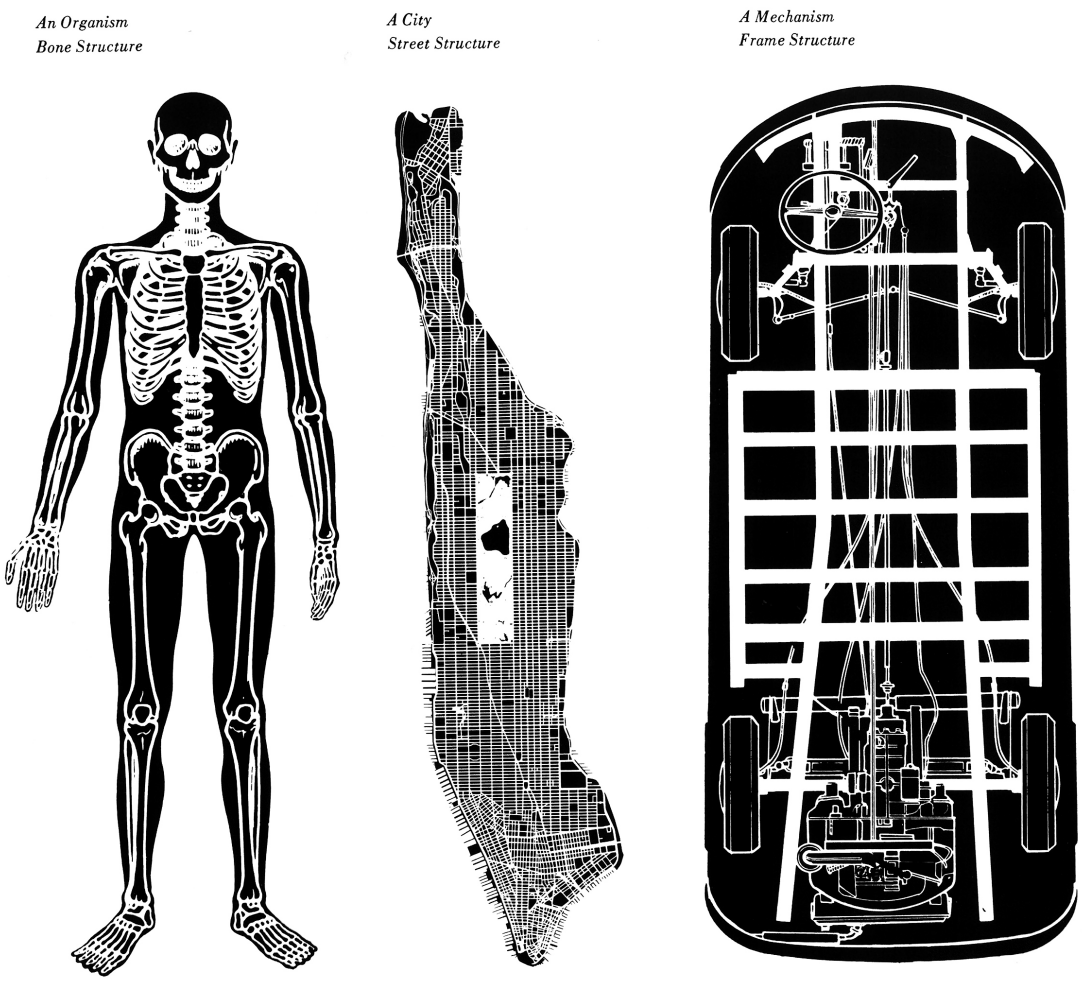

Fig. 1: ‘City Metaphors’, juxtaposing a city map with images of an organism and a mechanism. Photo: Ungers Archive for Architectural Research UAA, 1982.

The new scientific achievements of the seventeenth and eighteenth centuries had spatial, social and professional implications. On the one hand, the city became the theatre in which to act socially on streets functioning as urban stages.[19] On the other hand, technological and economic changes emphasised the professional division between engineers and architects.[20] At that time, however, buildings and streets were dirty, unpaved, with exposed sewage and extremely congested. In the planning of Washington DC by Thomas Jefferson and Pierre Charles L'Enfant, engineers and new building technologies such as water supply and drainage were central in pursuing a healthy city on the model of a healthy body.[21]

The growing industrial sector ushered in the advent of modern capitalism and the globalisation of some companies.[22] Modern architects and urbanists embedded the capitalist necessity of performance and economic efficiency in their design strategies. This was the beginning of zoning and single-use development.[23] In this, the experience of the streets was dramatically subverted. The introduction of different levels of urban arteries and veins forced a compartmentalised circulation of goods and people (as for example in the London underground). Inevitably, people no longer dwelled in the city while they moved through, it detached from its narratives. The urban body was fragmented.[24] Whereas theorists who were also practitioners such as Le Corbusier attempted to impose mathematical patterns based on the human body on buildings (the Modulor – a concept criticised at the time, and for different reasons, today), others such as Oswald Mathias Ungers limited the body-buildings analogy to visual metaphors and a morphological design.[25] [Fig. 1] Authors such as Ernst Neufert and Henry Dreyfuss introduced standardised spatial measures to comfortably accommodate a standardised human body and its activities. The exception was Frederick Kiesler. The Austrian architect expressed a physical and physiological understanding of human bodies in his 'Endless House'.[26]

Whereas the modernists dedicated more attention to the rational sheltering of the human body in the built environment, post-modern culture occupied a different position. Architects such as Coop Himmelb(l)au, Bernard Tschumi and Daniel Libeskind were concerned with the bodily analogy, and with reinscribing the classical and humanist body in their work. The human body no longer served to centre, stabilise or fix. It was a body that seemed to be as fragmented as the built environment, with ambiguous boundaries between interior and exterior.[27] The conventional human body, for instance, was threatened by the confrontation with Tschumi's work. The follies at Parc de la Villette proposed totally different forms and a different sensibility of a new revolutionary body despite their reference to Constructivism theories.[28]

This historical overview of the body-buildings analogy risks irritating both historians and theoreticians of architecture. Albeit, the danger of a historical focus of the article and the temptation of describing everything about the western history of the body in architecture is therefore contained, while common patterns around the interpretation of the analogy are revealed. In other words, there is a systemic coupling of the human body and the built environment. Notwithstanding its architectural or urban scale, the built environment metaphorically, mathematically, and psychologically resembles the human body. At the same time, the status of the human body is placed in question, both in its inner procedures and outward appearance. Hence, a renewed body-buildings analogy demands the comprehension of its essentials: the genealogy of the hyper city and the posthuman body.

Hyper urbanism

The production and circulation of information rather than goods and people became central in twentieth-century industry and everyday life.[29] Information progressively changed 'from atoms to bits' and thereby it could potentially be produced anywhere and at any time.[30] This transformation, characterised

Fig. 2: Hyper city street view. Still from a short film: Keiichi Matsuda, 2016.

by a global appeal, required a new set of infrastructures with multiple forms and tools that could rapidly process and communicate data.[31] The first step in this infrastructural transformation was the 1866 laying of the transatlantic cable between London and New York. It was the first lasting attempt to create a global network that acquired complexity although less material consistency over time.[32]

Thenceforth, infrastructures such as the internet, and tools such as data processing machines have been the backbone of a profoundly transformed built environment.[33] Global hyper-connectivity, the proliferation of networks, the overwhelming generation and thereby circulation of data have determined the quantification of the built environment.[34] As a consequence, the experience of the built environment has acquired peculiarities that are related more to informational networks than to pre-existing architectural and urban settings.[35] The 1991 essay collection *Cyberspace: First Steps* explores this transformation and its epochs in terms of the spatial, cultural, social and psychological implications.[36] The book gives particular attention to the last epoch of this infrastructural transformation: cyberspace and virtual reality (VR). They are described as a realm of pure information, and a representation of a post-industrial metasocial field for interactions. Nonetheless, the book also introduces different ways in which cyberspace and VR relate to the physical environment. This defines a clear line between objects with generative computational capabilities of cyberspace, and AR. It results in a successfully distributed application of cyberspace and VR to the ordinary world. While cyberspace and VR produce a complete detachment from the real world and the richness, practical and emotional significance of what composes it, AR includes these aspects.[37]

The hyper city, therefore, is a speculative example – and probably the most recent – in which virtual and physical environments merge together.[38] The hyper city enriches the physical environment of the contemporary city through Keiichi Matsuda's hyper-reality technology.[39] It is a megastructure that covers an urban settlement with virtual layers that give visual consistency to the generation and circulation of data, hyper-connectivity and multiple networks by means of a combination of existing tools (such as AR and the internet of things). Hyper-reality acts as an interface between the hyper city's inhabitants and its multiple virtual layers. [Fig. 2] In this, inhabitants are capable of manipulating these layers.[40] However, the hyper city expresses a dualism between its public image and inhabitants' multiple individual images. They visually translate a coexistence of different rhythms to experience and to perform depending on the network of which inhabitants are part. Inevitably, historical, biological and physical notions of proximity and distance, the gradient of time and memories are lost. The form, the time, the scale and materiality become the elements that define the hyper city and its experience.[41]

But whereas, it is easy to find parallels with either Todd Presner, David Shepard and Yoh Kawano's definition of hyper cities or Timothy Morton's notion of hyperobjects as pervasive, large, and multidimensional things distributed in time and space relative to humans, the brief genealogy of the hyper city presented here also acknowledges the intimate bond with its inhabitants, a society detached from the biological and physical notions of time and space: the 'network society'.[42] Aware of this detachment in his attempt to reconstitute the more numerous collective signifying forms within the technological milieu, Stiegler explains this synchronisation of different technological tools, economic and societal programmes, beyond the attributes of informational networks, as the 'hyper-industrial society'.[43] In this synchronising tendency, Stiegler also notes some fundamental issues such as inhabitants' diminished ability to engage with their individual affective and intellectual faculties: a disorientation.[44] The cause of this individual disorientation is founded in the growth of neoliberal capitalism blending with technical programmes and networks' universal principle

of efficiency. These impose a hyper-capitalisation of society. It is no longer made whole through the ethics of collective signifying forms transposing a communal and individual recognition, justice and democracy. Rather, the hyper-capitalised society is recognised with the constantly transforming stupidities of cosmetic technologies, hyper-consumption, financial speculation and hyper-sexuality through which neoliberal capitalism creates a crisis of the individual's self-consciousness.[45]

As a response, inhabitants' human nature and their body status have undergone an analogous transformation that results from the combination of two different processes: the quantification of the human body and the escapist desire to transcend its biological limits. The next part gives critical insight into the two processes.

The age of the posthuman

Historically, the first process – the quantification of the human body, began in the nineteenth century with Francis Galton's studies of fingerprint records.[46] More recently (between 1998 and 2010), Gordon Bell stored personal data such as everyday photos, computer activities, and biometrics in specifically designed hardware and software – the 'Your Life, Uploaded' project.[47] From scattered and voluntary events in which biological entities were quantified, the establishment of portable technologies such as smartphones, sensors and wearables (smart watchbands, clothing, Google Glass, and so on) as everyday essentials attached to human bodies quantified digital traces. These technologies generate rich digital portraits that report the activities of human bodies in the everyday real world back to the digital domain.[48] The human body is therefore simultaneously a node and a network that stores, shares and produces data.[49] Yuval Noah Harari labels this quantification process 'dataism'. While 'dataism' is potentially applicable to anything in the real world, Harari recognises in this quantification process a more primitive need of an obsolete Homo Sapiens: to be part of something bigger than oneself. As a consequence, 'dataism', with its ritual aspect, acquires an almost religious quality.[50] Nicholas Negroponte describes it as analogous to a force of nature.[51]

The second process, takes the humans' primordial desire to escape their biological limits further. This is illustrated in Beatriz Colomina and Mark Wigley's book *Are We Human? Notes on the Archeology of Design*. By unravelling the bilateral relationship that unites design and human beings, the authors acknowledge a historical partnership between technology/design and humans.[52] This partnership began with prehistoric humans, their survival instinct and the necessity for them to face human biological limits (for example, the first stone tool supported the prehistoric emergence of the human species). If primordial needs such as hunger triggered the partnership, the desire to escape from the biological limits of an out-to-date human body towards divinity pushed the partnership towards a symbiosis with the machine.[53] More advanced forms of this escapism are illustrated in Mark O'Connell's book *To Be a Machine: Adventures Among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death*. For example, Dr Natasha Vita More created the Primo Posthuman project, a physical avatar onto which an independent human mind can be uploaded. In its essence, the Primo Posthuman speculates on the logic of wearable technology, although with a human aspect.[54] Nevertheless, the 1983 arrival of mobile phones opened up the possibility of this dual transformation at the mass scale. Biological and mechanical entities merged as natural extensions whereas the informational consistency prevailed over the material consistency.[55] Here, human beings have a physical and virtual body.[56] They start a co-operative coexistence with 'mechanisms equipped with processors,' as Nicholas Negroponte envisioned, to establish systems capable of evolving.[57] The idea of a system capable of evolving probably emerged with André Leroi-Gourhan's work on prehistoric culture.[58] Artists such as Stelarc with his 'Fractal

Flesh' or Roberto Bolle's dance with a robotic arm have performed this co-operative coexistence and thereby a condition of evolution in contemporary culture.[59]

Such an interpretation is reinforced by Stiegler's approach to posthumans. In the same vein as Rosi Braidotti's transposition and Julia Kristeva's poetics, he situates his condition of evolution both at the superficial and the deep level. While the dual transformation (that is, the quantification of the human body and the desire to escape its biological limits) represents the superficial and skeletal level, the intensified fundamental questioning of fundamental aspects of human nature such as life and mortality is the deep level.[60] And yet for Stiegler, the questioning of human nature and the status of the human body's dual evolutionary transformation into a technorganic hybrid stems from the synchronising conjunction of knowledge and technologies encompassing artificial intelligence, biology and cybernetics. However, this also contributes to the process of hyper-industrialisation in which the increasingly close relationship between technological production and the logic of capitalisation leads to a hyper-capitalisation of society. This is an overdetermination of everyday life, which exposes the evolved technorganic hybrid individuals to the damage to their sensorial and intellectual faculties.[61] From a Stieglerian perspective, we must pay attention to the formative process of the evolved technorganic hybrid individuals. Within the context of a hyper-capitalised society, the formative process pushes out the culture of ethics as a mode of distributing the possibility of collective and self-expressions.[62] This restrains certain essential differences and unforeseen encounters between biological and mechanical entities, and their physical and virtual bodies. The lack of essential differences and unforeseen encounters impoverishes noetic activities and thereby also the self-consciousness of evolved technorganic hybrid individuals.[63]

Considering all of this evidence, the dual and simultaneous transformation at the superficial and deep level constitutes the term posthuman in this article, a post-gender subject that combines fictional and lived experiences. Regardless of the hyper-capitalised society, neither the machine nor the human being dominates or threatens the others. These entities are only responsible for defining the boundaries between themselves, their body and the built environment.[64] The biological body and the built environment are restructuring themselves through a digital quantification and a merger with technology; while the subject is no longer necessarily human.

Reforming the body/city analogy

A limited scrutiny of the posthuman body/hyper city paradigm suggests either a metaphorical or a mathematical interpretation of the analogy. Nevertheless, the posthuman body/hyper city paradigm is radical in the formulation of a psychological interpretation of the analogy. Indeed, it does so more ontologically than as an analogy. In the overstimulating experience of the hyper city, posthuman inhabitants potentially engage with the hyper city's distinguishing characteristics and the complexity of its digital layers beyond their specific visual aspects.[65] Posthuman inhabitants, for instance, perform work activities simultaneously with shopping. In a certain sense, different although simultaneous activities promote different although simultaneous rhythms and speeds of posthuman inhabitants. This establishes an indissociable but contradictory link between the hybrid (that is, a physical and virtual) space of the hyper city and its occupants. The hybrid space is an assisted space in which hyper-reality technology informs posthuman users about specific actions such as when to get off the bus, while emoticons, pinpoints and tags indicate dangers such as malicious software, or reassuring elements such as a virtual votive niche in the hyper city.[66] Rather, the availability of intelligent or assisted spaces, smart devices and their simplified languages (that is, emoticons, pinpoints, and tags) prescribe to posthuman inhabitants how to separately deal with the different although simultaneous activities, rhythms and speeds.[67] Inevitably, the hybrid space of the

hyper city becomes a stage for compartmentalised experiences with a robust individualistic character.[68] At this point, physical and virtual interactions with other posthuman inhabitants are optional. The next Amazon algorithm knows us, and others, better than we do ourselves.[69] This contradiction recalls past consumerist capitalist solutions that attempt the continuous reordering of posthumans' communal and individual life. The hyper city becomes an expression of hyper-capitalised society, with a sense of the acute disorientation of its posthuman inhabitants.[70]

This denies all the promises regarding a regained urban complexity analogous to the psychological understanding of posthuman bodies and their digital shadows. To avoid the risk of hyper-capitalised society and posthumans' disorientation, we must acknowledge the necessity of a continuity between posthuman subjects and the hyper city. This continuity arises from posthuman subjects' self-consciousness and their capacity to define their own boundaries. An initial formalisation of this concept is found in Martin Heidegger's writings. In the 1951 lecture *Building Dwelling Thinking*, he questions modernism and its implications for the built environment. Heidegger is concerned about how modern technocratic functionalism transforms humans into passive occupants of a prescribing built environment. Therefore, he reclaims a continuity between humans and their everyday space while rejecting the modern functionalist divide. This division is the consequence of an adopted wrong philosophy. It is a metaphysical problem that conveys the 'very form of reasoning' without taking into account what Being is.[71] Heidegger's investigations of modern technocratic functionalism, capable of imposing structures against humans effectively dwelling in the built environment, continue in *The Question Concerning Technology*. The article aims to disentangle the essence of technology. It has nothing to do with technology as a tool or a mere instrument that supports humans in meeting their ambitions. The essence of technology lies rather in the act of revealing. This refers to Plato's link of the word *techne* to *episteme,* which expresses a mode of revealing. It gives back to humans a self-consciousness, and thereby control of the built environment surrounding them. Humans, therefore, are subjects of the built environment, and its technology no longer poses a threat.[72] Bernard Stiegler offers a robust critique of the ambiguity and obsolescence of Heidegger's work, although with an equal engagement with Plato's writings. In *Technics and Time, 1: The Fault of Epimetheus*, he describes the human evolutionary process as informed more by technology than biology. It is a revealing process in which technology is guided by forces that humans constantly have to negotiate to limit its dangers in favour of its healing powers. For example, technology appears to be a power in the service of humanity but it also becomes autonomous. Heidegger's analysis ignores the Epimethean and Promethean primordial sense of technology. Dasein retains its privileges over technology. This technology is a prosthesis with no truly constitutive role. In these terms, the prosthesis is synonymous with inequality. Given that inequality, Stiegler pleads for its destruction by revealing and orienting the threshold between 'the who' (humans) and 'the what' (technology).[73] With a debt to Jacques Derrida's account of the 'grammè', this is not a rupture with biological nature but its re-organisation. Consequently, the prosthesis constitutes the human body, it is not just an extension. For humans, the prosthesis is not a means but an end.[74] This new organisation, called 'technological Dasein' by Stiegler, transforms the relationship and actions through which humans compose their collective and individual lives.[75]

To avoid prescribed and assisted spaces with a strong individualistic character, therefore, the hyper city must be an end, not a means, for posthuman inhabitants. The hyper-reality megastructure is oriented through existing technologies such as wearables, and the internet of things. In this, the technorganic hybrid post-gender subject

(that is, the posthuman inhabitant) reveals and defines thresholds and boundaries between the constitutive entities. The quest for continuity and subsequent establishment of thresholds, for example, is confirmed by one of the fictional characters who is an AI-run corporation's teleoperator and an inhabitant of the hyper city. In her fight for economic survival, the fictional character openly expresses her disorientation and confusion about the threshold between digital and physical domains, flesh and machines. Lacking the capacity to distinguish the threshold, the fictional character is unable to orient the threshold.[76] This is impossible without the consciousness of the posthuman subject.

In a critical reading of Husserl, Stiegler identifies consciousness as the producer of this continuity between something outside of the object of consciousness and the object of consciousness itself. In the case of humans, they rationally know everything about themselves. Their bodies as a whole are the instruments that humans understand – the object of consciousness. Technology is perceived as a prosthesis thereby something outside the human bodies. This consciousness, which is a self-consciousness, 'a gesture of thoughts', is synonymous with the comprehension of the essence of technology as the act of revealing.[77] That act, however, comes after memory. Thousands of years after the Promethean fire, humans still attempt to fill their Epimethean void with memory. This can be understood through Husserl's concept of retention. Husserl discerns two different categories of retention. 'Primary retention' emerges from an encounter of phenomena in the present and with the immediate past and future. 'Secondary retention' is from memory, including, by implication, memories of collective and individual lives accumulated since childhood. Thus, memory an archive of human culture is the condition for a self-consciousness of humans. Stiegler introduces the concept of 'tertiary retention', when the self-consciousness is externalised. For example, 'tertiary retention' manifests itself in writing, in cooking, and in dwelling.[78] In random-access memory and hard drives, in revealing and orienting boundaries between digital and physical domains, flesh and machines.

Fundamental to the externalisation of a self-consciousness is the use of the terms endosomatic and exosomatic.[79] Authors such as Alfred J. Lotka and Nicholas Georgescu-Roegen call those instruments that belong to humans by birth, such as legs, endosomatic. Exosomatic instruments are produced by humans, but do not belong to their bodies.[80] Similarly, although mitigated by an interest in the development of a rational externalisation of the process of communication, Karl Popper argued that exosomatic processes give the specificity of human reason the possibility to express itself, for example in writing and criticism.[81] Stiegler expands Popper's argument by acknowledging the presence of new technologies, and by implication new forms of externalisation, as well as questioning existing ones. Stiegler laments this increasingly close relationship between technological production, exosomatic processes and the logic of capitalisation.[82] To frame the capability of these exosomatic and endosomatic processes to create an externalised self-consciousness rooted in collective and individual memories and signifying forms against the capitalist market's dynamics in the context of new technologies such as hyper-reality, we must appeal to David M. Berry's definition of 'infrasomatisation': a social-structuring infrastructure that follows a complex fusion of exosomatic techniques and endosomatic capacities to create a self-conscious technological milieu.[83] There, the available technologies such as AR, wearables, and the internet of things are ready to be self-consciously configured and reconfigured to permit collective and self-expressions, and the materialisation of their ethical values.[84] This confirms an irrevocable distance between the inaccessible hyperobject that a humiliated humanity cannot address, and the hyper city.[85]

In the posthuman/hyper city paradigm, therefore, posthuman inhabitants own knowledge for the use of existing technologies as well as for information

management and production. Posthuman inhabitants do not only rely on predetermined scripts, although they can write their codes and software.[86] The posthuman inhabitant types X and Y comes into being by means of interfaces such as smartphones. Mathematics and data generate virtual and physical narratives, in which posthuman doers and users of the hyper city overlap.[87] The power of the configuration and reconfiguration, production and post-production, storing and dissemination of information no longer belongs to the logic of efficiency, constantly transforming cosmetic technologies, hyper-consumption, hyper-sexuality and financial speculation, and thereby to a hyper-capitalised society.[88] Indeed, this power mutually belongs to the hyper city and its posthuman inhabitants, and makes possible what Stiegler termed an 'economy of contribution'.[89] This 'economy' reconsiders the antagonistic relationship between the capitalisation of a technologically organised individual and communal life, and the ethics of community, while welcoming back noetic activities, the possibility of collective and self-expressions, and signifying forms.[90]

Such a hyper city is difficult to explicate. The posthuman inhabitants have not been able to incorporate new dynamics and their complexity of a new technology. A new technology that is exposed to the systemic power of capitalisation. This converges into a disharmony, a tension, which leads to fragmentation. Nonetheless, the tension presents the chance of return of self-consciousness for posthuman inhabitants. Stiegler called this tension the 'pharmakon'.[91] The pharmacological comprehension of this tension is essential for the emergence of a self-conscious continuity between the digital and physical domains, flesh and machines. The self-conscious continuity allows the emancipation of posthuman inhabitants in the infrasomatised hyper city. It reveals and orients thresholds among the different domains of the hyper city and its posthuman bodies. Lodged between these domains, the agency of not only the posthuman inhabitants but also of the hyper city itself are renewed. As a result, the psychological interpretation of the analogy is fully established.

Conclusion

The posthuman body/hyper city paradigm allows us to explore the historical relationship between bodies and buildings. Discussing the dual transformation of human nature in the context of a radically digitised built environment through data production, hyper-connectivity, and networks reveals spatial, cultural, social and psychological implications. This article argues that the posthuman body/hyper city paradigm may contain a renewed psychological interpretation of the body/buildings analogy. The posthuman self-conscious continuity with technology reveals and orients thresholds between flesh and machines. Analogously, the posthuman conscious programming and scripting action reveals and orients thresholds between the digital and physical domains of the hyper city. This posthuman self-conscious continuity refuses the prosthetic and prescriptive urban condition synonymous with a segmented and standardised lifestyle and economies inherited from modernism and the systemic power of capitalisation. Inevitably, the military origin of networks, and the division between an exclusive programming and scripting caste and simple users have contributed to the proliferation of a prosthetic and prescriptive urban condition.[92] Consequently, the posthuman body/hyper city paradigm offers an alternative, nurturing the self-conscious continuity of a posthuman inhabitant. It originates from a pharmacological effect of technologies such as hyper-reality and its infrasomatisation. This avoids a growing splitting, and colonialist or 'on-demand' approach to urban and architectural spaces.[93] The revealing and orienting of boundaries between digital and physical domains, flesh and machines attribute to the hyper city and its inhabitants something in common with the pre-industrial city: its indeterminism and complexity. This is neither a holistic mythification of past urban conditions

against the increasingly private visions of romantic individualists of the last decades, nor a warning to slow the pace at which technology destroys the ethics of community and its signifying forms. In my opinion, the renewed psychological interpretation of the body/buildings analogy in this article is the only possible basis for the restoration of a critical agency to architecture, urbanism and their inhabitants, otherwise assassinated by the endless cycles of standardised and prosthetic technological and spatial production and consumption.

Notes

1. Anthony Vidler, 'The Building in Pain: The Body and Architecture in Post-Modern Culture', *AA Files* no. 19 (1990): 3–10, http://www.jstor.org/stable/29543679.
2. Mohsen Mostafavi, *The Ethics of the Urban: the City and the Space of the Political* (Zurich: Lars Muller Publishers, 2017).
3. Matthew Claudel and Carlo Ratti, *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life* (New Haven: Yale University Press, 2016); Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).
4. Elizabeth Grosz, 'Bodies-Cities', in *Sexuality and Space: Princeton Papers on Architecture*, ed. Beatriz Colomina (Princeton: Princeton Architectural Press, 1992), 241–53.
5. Gilbert Simondon, *On the Mode of Existence of Technical Objects,* trans. Cecile Malaspina and John Rogrove (Minneapolis: University of Minnesota Press, 2016).
6. Ross Abbinnett, *The Thought of Bernard Stiegler: Capitalism, Technology and the Politics of Spirit* (New York: Routledge, 2018). For Stiegler, the ethics of community come into being through coordinated actions and collective relationships that do not have fixed and prescriptive forms.
7. Davide Landi, 'The Image of the Hyper City', *International Journal for the Semiotics of Law* 32, Special Issue: Cities as Ill Bodies (2018): 533–48, https://doi.org/10.1007/s11196-018-9583-8. In 2018, I presented the paper 'The Hyper-Reality Principles in the Age of the Posthumanism: the Paradigm Posthuman Body-Hyper City' at the 15th Architectural Humanities Research Association International Conference, Eindhoven, the Netherlands, where I signal a return to the body/buildings analogy following the recent digital turn.
8. Keiichi Matsuda, 'Hyper-Reality', 2016, *Critical Design*, 16 May 2016, video, 6:15. https://vimeo.com/166807261. 'Hyper-Reality' is a concept film shot in Medellín, Colombia. It proposes a speculative vision

of the future where the hyper-reality technology and its tools such as AR, wearables, and the internet of things are interwoven with every aspect of human life.

9. Grosz, 'Bodies-Cities', 241–53; Hayles, *How We Became Posthuman.*
10. Elizabeth Grosz, *Architecture from the Outside: Essays on the Virtual and Real Space* (Cambridge, MA: MIT Press, 2001).
11. Beatriz Colomina, and Mark Wigley, *Are We Human? Notes on an Archaeology of Design* (Zurich: Lars Muller Publisher, 2016).
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Biography

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