

Anthropological Reflections on the Art of the Possible

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1. Constant's New Babylon

«In 1956, the Dutch artist Constant Nieuwenhuys started working on a visionary architectural proposal for a future society; he didn't stop for almost twenty years. Having been a co-founder of the Cobra group of artists in the late forties, he abandoned painting in 1953 to concentrate on the question of 'construction'. He became a founding member of the Situationist International in 1957 and played a central role in their experiments until his resignation in 1960. New Babylon, as his project would eventually be called, is a situationist city intended as a polemical provocation.

New Babylon was elaborated in an endless series of models, sketches, etchings, lithographs, collages, architectural drawings, and photocollages, as well as in manifestos, essays, lectures, and films. New Babylon is a form of propaganda that critiques conventional social structures.

New Babylon envisages a society of total automation in which the need to work is replaced with a nomadic life of creative play, in which traditional architecture has disintegrated along with the social institutions that it propped up. A vast network of enormous multilevel interior spaces propagates to eventually cover the planet. These interconnected 'sectors' float above the ground on tall columns. While vehicular traffic rushes underneath and air traffic lands on the roof, the inhabitants drift by foot through the huge labyrinthine interiors, endlessly reconstructing the atmospheres of the spaces. Every aspect of the environment can be controlled and reconfigured spontaneously. Social life becomes architectural play. Architecture becomes a flickering display of interacting desires.

Constant always saw New Babylon as a realizable project, which provoked intense debates at schools of architecture and fine arts about the future role of the architect. Constant insist-

ed that the traditional arts would be displaced by a collective form of creativity. He positioned his project at the threshold of the end of art and architecture. Yet it had a major influence on the work of subsequent generations of architects. It was published widely in the international press in the 1960s and Constant quickly attained a prominent position in the world of experimental architecture. But this influence would eventually be forgotten; the project has not been displayed since Constant stopped working on it in 1974.» (Witte de With. Center for Contemporary Art 1998).

The above text is quoted from the website of Witte de With, a center for contemporary art in Rotterdam. It has been published about ten years ago as the introduction to the exposition Constant's New Babylon: the hyper-architecture of desire, that took place at Witte de With from November 21, 1998 until January 10, 1999. Though the text still offers an adequate description of Constant's New Babylon project, looking back the claim that Constant's influence was eventually been forgotten cannot be said to be true anymore. Although the big New Babylon exhibition in The Hague in 1974 was indeed the last complete presentation of Constant's New Babylon, in the two and a half decades that followed several smaller presentations have been organized, for example in the context of the Situationist International exhibition in Centre Pompidou in Paris in 1989, and (here) in Barcelona, in 1997, at the Situationists. Art, Politics, Urbanism exhibition in 1997.

Moreover, Constant's New Babylon has been rediscovered massively by curators, architects and theoreticians since the 1998 exhibition in Rotterdam. Already in 1999, one year after the exhibition in Rotterdam, the Drawing Center in New York organized the first American exhibition of Constant's project, entitled Constant's New Babylon: City for Another Life. The conference that accompanied this exhibition resulted in the publication of an impressive collection of essays by MIT Press: *The Activist Drawing Retracing Situationist Architectures from Constant's New Babylon to Beyond* in 2001. In that same year Musée Picasso in Antibes organized a retrospective exhibition, followed, in 2002, by a special 'tribute exhibition' at the Documenta XI in Kassel. And in 2004 the Neue National Galerie in Berlin displayed a series of maquettes of Constant together with designs, texts, photos and texts of Rem Koolhaas in order to show the major impact New Babylon had on the present generation of leading architects. As Mark Wigly wrote in the catalogue of *The Hyper-Architecture of Desire* exhibition: «Traces of his thinking are evident in a whole chain of experimental architectural practices: Archigram, Architecture Principle, Eventspace, Superstudio, Archizoom, Office of Metropolitan Architecture, and NATO, to name but a few. Its impact can be seen in the specific design proposals, the theoretical proposals, the organization of the groups, and the multi-media format they deploy. Indeed, New Babylon still resonates strongly with contemporary work» (WIGLEY 1998). This makes Constant, as Bartomeu Marí, director of the Witte de With Center expresses it in the Preface of the same catalogue, «one of the major visionary architects of this [that is: the twentieth] century» (idem, 5).

Being a visionary architect, Constant is deeply rooted in the avant-garde tradition that goes back - via the historical avant-gardes of the twentieth century, such as futurism, cubism, Dada, surrealism, constructivism, and Bauhaus - to the Romantic revolutionaries of the beginning of nineteenth century . What these avant-garde movements shared was a Romantic aversion against the l'art pour l'art ideology that separated art from life and the no less Romantic ideal to reunite art and life again (cf. DE MUL, 1999). Though Constant repeatedly refers to Johan Huizinga's *Homo Ludens* (1938) in his texts on New Babylon, and without a doubt has been influenced deeply by Huizinga's idea that play and freedom are closely connected, he opposes Huizinga's claim that play is distinct from 'ordinary' life both in terms of locality and duration (HUIZINGA 1970). Constant, on the contrary, strived for a radical 'ludification' of life and society as a whole: the *Homo Ludens* of the future «turns away from the utilitarian world in which creativeness was only an escape and a protest» (CONSTANT 1970). In this respect the 'society of infinite play' Constant envisioned shows more kinship with the playful world Friedrich Schiller sketched in his *On the Aesthetic Education of Man* (1794/1795), in which he argues for the emancipation of the human play-drive. His emphasis on human playfulness also connects Constant with the counter-culture of the sixties, especially with his contemporary Herbert Marcuse who, in *Eros and Culture*, published one year before Constant started the New Babylon project, also followed Schiller's Romantic ludology (MARCUSE 1955). Moreover, some of the philosophies favored by the representatives of the current counter-culture, such as Gilles Deleuze's desirology, also show remarkable similarities with the spirit of Constant's New Babylon. Deleuze's notion of the productivity of desire and his plea for a nomadic lifestyle resemble the nomadic life of the New Babylonians, who live in a «world of plenty» (CONSTANT and SCHIMMELPENNINCK 1998),, in which «under one roof, with the aid of moveable elements, a shared residence is built; a temporary, constantly remodeled living area; a camp for nomads on a planetary scale» (CONSTANT 1974).

However, the most remarkable rediscovery of Constant took place in the realm of cyberspace and hybrid space theories. «Perhaps the most striking resonance is the way the project prefigures contemporary concerns with electronic space. Its fantasies of an infinite flexible, ever-shifting, interactive spatiality is echoed in countless computer-based projects of recent years» (WIGLEY 1998, 63). Within this perspective, New Babylon appears as an analogue prefiguration of the World Wide Web. In the words of the editors of *The Activist Drawing: Retracing Situationist Architectures from Constant's New Babylon to Beyond*: «Several decades before the current debate about architecture in the supposedly placeless electronic age, Constant conceived an urban and architectural model that literally envisaged the World Wide Web. The inhabitants of his New Babylon drift through huge labyrinthine interiors, perpetually reconstructing every aspect of the environment according to their latest desires. Walls, floors, lighting, sound, color, texture, and smell keep changing. This network of vast 'sectors' can be seen as a physical embodiment of the Internet, where people configure their individual Web sites and wander from site to site without limits. With its parallels

to our virtual world, New Babylon seems as radical today as when it was created» (CONSTANT, ZEGHER et al. 2001, back flap). And it should be stressed that this is not simply a conceptual parallel. The computer was at the very heart of New Babylon: «In 1957, Constant had written in the Liga Bulletin that 'technique, electronics, construction, and movement' were already transcending their utilitarian meanings. At the opening of the Essen exhibition [in 1960], 'Electronics, automation, cybernetics, space travel, chemicals is the list of raw materials of the new way of life'. From the beginning, Constant closely followed the arguments of Norbert Wiener, the leading theorist of cybernetics, repeatedly citing texts like The Human use of Human Beings to the effect that the computer will allow all work to be automated.» (WIGLEY 1998, 63).

However, like the other members of the Situationist International, such as Guy Debord and Asker Jorn, Constant strongly opposed any form of utilitarian society, be it capitalist or socialist, as this type of community asserts «the exploitation of the human being's capacity for work» as «a fundamental reality». The 'unitary urbanism' the situationists defended, aimed at a synthesis of art and technology. For that reason, New Babylon should be both technological and playful: «Technology is the indispensable tool for realizing an experimental collectivism. To seek to dominate nature without the help of technique is pure fiction. As is collective creation without the appropriate means of communication. A renewed, reinvented audiovisual media is an indispensable aid. In a fluctuating community, without a fixed base, contacts can only be maintained by intensive telecommunications. Each sector will be provided with the latest equipment, accessible to everyone, whose use, we should note, is never strictly functional. In New Babylon air conditioning does not only serve to recreate, as in utilitarian society, an 'ideal' climate, but to vary ambiance to the greatest possible degree. As for telecommunications, it does not only, or principally, serve interests of a practical kind. It is at the service of ludic activity, it is a form of play» (CONSTANT 1974).

However, it is not only because of the use of 'intense telecommunications' and computers that New Babylon prefigures cyberspace. It is also, and more profoundly, the flexible database-like structure of New Babylon. The dynamic, endless recombination of architectural elements that characterize New Babylon expresses the database ontology that rules our present age. New Babylon is a paradigmatic example of what we might call 'recombinant urbanism' or 'database architecture'.

2. Database Architecture

When we use the term 'database architecture' we may refer to two different things. On the one hand it is a familiar term in information theory. In this case the emphasis is on the word database ('database architecture'). The word 'database' refers to a structured collection of records or data that is stored in a computer system. Within information theory the meaning

of the word 'database' is not univocal, however. It has at least three different meanings. First of all, the word 'database' might refer to the collection of data (for example a list containing all the titles of the books on Constant's New Babylon in a particular library). Second, it might refer to the hard- and software used to organize these data. For example, I use EndNote, a bibliographical database that runs on a Windows PC. A more precise formulation of this second meaning of the word 'database' is 'database management system' or DBMS. Third, the word 'database' might refer to the specific conceptual model or principle according to which the database management system is designed. In the course of the (short) history of the computer database, different database models have been developed, such as the hierarchical model, the network model and the relational model. It is within this context that the word 'database' is often used in combination with the word 'architecture'. 'Database architecture', then, refers to the specific conceptual structure and functional behavior of the database management system under consideration.

Although we have seen a remarkable development in database modeling in the past decades, leading to ever more flexible database models (the relational database currently being the most flexible and therefore dominant type), on a fundamental level all database models show the four basic operations of persistent storage, which we might call the ABCD of computing: Add, Browse, Change, and Destroy. Together these four basic operations of almost all computer software - which correspond to the structured query language (SQL) commands Insert, Select, Update, and Delete - form the dynamic elements of the database ontology that constitutes the fundament of the worldview in our age of digital recombination.

Nowadays, database applications span virtually the entire range of computer software, ranging from mainframe databases for administrative purposes and multimedia encyclopedias on cd-roms to search engines, wiki's and other Web 2.0 applications on the Internet. However, the impact of databases is not restricted to the world of computing. Databases often function as material metaphors. This happens when they evoke acts in the material world (HAYLES 2002). Examples of these are biotechnological databases used for genetic engineering, or databases implemented in industrial robots, enabling mass customization. In addition, databases may create a surplus of meaning, on top of their instrumental function (cf. VAN DEN BOOMEN, in preparation). In that case the database functions as a conceptual metaphor which structures our experience of ourselves and of the world.

The psychologist Maslov once remarked that for those who only have a hammer, everything appears to be a nail. In a world in which the computer has become the dominant technology everything is becoming a database. As Lev Manovich states in *The Language of New Media*, databases have become the dominant cultural form of the computer age (MANOVICH 2002, 219). This also applies to the world of architecture, and this brings me to the second cluster of meanings that surround the phrase 'database architecture'.

If we put the emphasis on the second word, the phrase, 'database architecture' refers to all types of architecture that are being constituted – 'in-form-ed' – by the aforementioned database ontology. Database architecture is a clear example of the material and conceptual effects of the database metaphor. Following Ole Bouman in *Realspace in Quicktimes. Architecture and Digitalization*, we could distinguish between three levels (BOUWMAN 1996). First of all, 'database architecture' might refer to the increasing use of computer technologies for the design and presentation of 'real architecture'. In a relatively short time Computer Aided Design (CAD) has changed the everyday practice of almost every architect. This is not surprising, given the fact that AutoCAD rationalizes the entire building process: «AutoCAD is capable of taking care of drafting, calculation, presentation and management, in short a fair slice of the production cycle of a building. The standardized format in which drawings are stored allows for problem-free data exchange via the modem or an internal network, while a growing library of building components – compiled to one's own specifications, of course – speeds up the process of assembling a design. In the presentation phase there are any number of application programs that can be invoked to optimize the design's persuasiveness (read: visual realism). Computer renderings can now approximate photorealistic quality» (BOUWMAN 1996, 31).

Because of the efficiency and effectivity of CAD this type of 'database architecture' has become absolutely dominant in the world of architectural design. Nowadays, the credo is: render or surrender. Building has become data manipulation, an endless recombination of building components. However, since we are dealing with a striking example of a material metaphor here, this data manipulation has profound reality effects: earth is increasingly being covered by database buildings.

The crucial question to be posed is whether we should be happy with this development, which predominantly serves utilitarian purposes. Moreover, it might easily lead to uniformity and mediocrity. As such, the dominant 'database architecture' seems to contradict Constant's vision of New Babylon as a creative and playful world. Ole Bouman already formulated this objection against 'database architecture' in 1996, when he wrote: «However easy, flexible and efficient most drawing program extensions may in many respects be, they inhibit creative computer use. For one thing, everything in the standard software is geared to solving notorious architectural problems. Because most architects see themselves as service providers, the makers of design software also think exclusively in terms of service. That is after all their market. What is lacking is a speculative level where architecture can be deployed to explore the strengths and paradoxes of a given program. Although the average architect will view the automatic solution of architectural problems as a happy release from a bad dream, for a creative mind it is more of an impediment than an improvement. For innovative architecture the presence of a catalogue of building components is nothing short of disastrous. The catalogue's very convenience turns it into a new tyranny. In architecture

only the greatest can get away with doing it the hard way if there is an easier way of doing things. To be perfectly blunt: the software industry is not in the business of inventing things that don't pay» (BOUWMAN 1996, 32-3).

Probably for the same reason Constant was reluctant to invest too much hope in the creative potentiality of the computer. In a lecture given to the Student Association at the Royal Academy of Copenhagen in 1964 he stated: «The only field of activity inaccessible for the computer is the unforeseeable act of creativity that makes the man change the world and reshape it after his capricious needs» (quoted in: WIGLEY 1998, 63).. One could question, however, if not the human use of computers constantly leads to unforeseen and unforeseeable side effects. We don't need randomizers and chance operation in order to find ourselves surprised by the outcomes of our computations. Used not as a (necessarily impoverished) replacement of the human mind but as an extension of the human mind, the computer can even be regarded as an amplifier of human creativity and playfulness. The Dutch architect Klaas van Berkel, who designed the Dutch pavilion at the Triennale di Milano in 1996, which was entirely devoted to the digitalization of architecture, expressed this impact as follows: «To me, the computer is a way of radically breaking with the traditional design processes. The mediation techniques enabled by the computer signify a complete overthrow of many architectural assumptions, from the typology of organizational structures, to the hierarchical order of planning a structure, ending with the details. The computer entails a radical rethinking of the valuations implicit in architectural design. In this sense computational techniques could represent the first important development in architecture since modernism» (quoted in: BOUWMAN 1996, 7). Here the database acts not only as a material metaphor, but as a conceptual metaphor as well, disclosing new visions on architectural design and dwelling.

Though Computer Aided Design, like any tool, doesn't offer any guarantee for quality or creativity, it might offer the creative architect possibilities that were unachievable in traditional analogue architectural design. It might not conquer gravity, but at least defy it in ways unheard of so far. And it enables forms of complexity unimaginable without the aid of the computer. Constant realizes this when he discusses the possibility of representing the complexity of the ever-changing topography of New Babylon, which could hardly be represented by traditional analogue models or maquettes. «Consequently», he writes in the text in the 1974 exhibition in The Hague, «any three-dimensional representation would, in itself, only have the value of a snapshot, since even admitting that the model of each sector may be reduced to several planes and sections of the different levels, and that one manages thereby to constitute a sort of detailed atlas of the sectors, it would still be necessary, from one instant to the next, to record, using symbolic notations as in a ship's log, all the topographical modifications that are produced. Recourse to a computer will doubtless be necessary to resolve such a complex problem» (CONSTANT 1974).

However, the use of Computer Aided Design covers only one aspect of 'database architecture'. The second meaning of this phrase refers to the implementation of intelligent database management systems in buildings. Here we enter the broad domain of domotics or home automation. We should not only think of already present techniques used in building automation, such as light and climate control, control of doors and window shutters, security and surveillance systems, but also of bathroom fittings that monitor your state of health, or provide you with clothing suggestions; of fridges that keep track of the groceries you might need, and automated cooking facilities; of the control of multi-media home entertainment systems, or automatic houseplant watering; of smart sustainable technologies that would enable self-sufficiency, and domestic robots or systems for pet feeding; of smart materials that facilitate extensive flexibility and that have the power to enhance experiences, or automatic scenes for dinners and parties, or online connections to a wide range of environments so as to banish any sense of monasticism: this would not be limited to graphic information but would also include olfactory, auditory and tactile data, and last but not least, more user-friendly and playful control interfaces. The ultimate version of this second type of 'database architecture' would be a «building that is actually one vast database» (BOUWMAN 1996, 39).

This second type of 'database architecture' is also an integral part of Constant's New Babylon. I quote once more from Constant's 1974 description of New Babylon: «The climatic conditions (the intensity of lighting, temperature, the hygrometric state, ventilation) are all under technical control. Inside, a variable range of climates can be created and modified at will. Climate becomes an important element in the play of ambiance, all the more so since the technical apparatus is accessible to everybody and the decentralization (of distribution) encourages a certain autonomy of the sector or group of sectors. Smaller centers are preferred to a single center, which facilitates reproducing the most diverse climates and, why not, inventing new ones as a contrast, changing the seasons, transforming them according to an infinitely varied synchronization accorded to the metamorphosis of space. The audio-visual media will be used in the same spirit. The fluctuating world of the sectors calls on facilities (a transmitting and receiving network) that are both decentralized and public. Given the participation of a large number of people in the transmission and reception of images and sounds, perfected telecommunications become an important factor in ludic social behavior» (CONSTANT 1974). All the changing desires of the playful New Babylonians will be accommodated by electronics that both monitors their desires and acts on them.

Though this may have sounded a weird utopia in 1974, at the beginning of the twenty-first century it has become the official vision and strategy of companies such as Philips under the title Ambient Intelligence: «Ambient Intelligence (Aml) is the vision that technology will become invisible, embedded in our natural surroundings, present whenever we need it, enabled by simple and effortless interactions, attuned to all our senses, adaptive to users and context and autonomously acting. High quality information and content must be avail-

able to any user, anywhere, at any time, and on any device» (LINDWER, MARCULESCU et al. 2003, 1). At the beginning of the new millennium the European Commission embraced this vision as one of its focal points for policy and strategy with regard to technology development, in order to arrive at a «a people friendly information society» (DUCATEL, BOGDANOWICZ et al. 2001; DUCATEL, BOGDANOWICZ et al. 2001; cf. VAN DEN BERG 2009, 57ff.).

It's clear that the gap between the Philip Ambilight and the visions formulated by Philips and the European Commission is still enormous, but it is remarkable how much this vision and strategy resembles New Babylon. And although it might be expected that our technological future will differ from the visions presented by Constant in many respects, the fact that this second type of 'database architecture' will find some form of realization in the not-so-far away future seems evident to me. Not only because of the technological developments that will facilitate its realization, but also because of social and cultural developments, like the aging of the population, the growth of the number of people that live alone or belong to busy double income households, and the growing environmental necessity of sustainable dwelling.

Whereas the first type of 'database architecture' – computer aided design – already expands the possibilities and flexibility of architectural design and construction, the second type designates a new step in the development of architecture as the 'Art of the Possible'. In its most radical form, as envisioned by Constant, the ambient intelligent buildings of the future will change permanently and endlessly. Referring to Herakleitos' famous saying, Ole Bouman declared that regarding the house of the future we will experience that 'you can't step twice into the same house' (BOUWMAN 1996, 39).

However, there is another, third meaning of the phrase 'database architecture' that will expand the 'Architectonical Art of the Possible' even further. I am referring to the design and construction of entirely virtual buildings, to the moment that we will 'enter the screen' and start to dwell in cyberspace, in buildings that are entirely built of information. Here 'database architecture' seems to find its ultimate destination. It opens a realm characterized by the endless recombination of its virtual building blocks, a world of endless change and flexibility, for which Mark Novak coined the term 'liquid architecture'. In his contribution to Benedikt's epochal *Cyberspace. First Steps* Novak expresses the fascination and euphoria that accompanied the discovery – or should we rather say: invention – of cyberspace: «Cyberspace is liquid. Liquid cyberspace, liquid architecture, liquid cities. Liquid architecture is more than kinetic architecture, robotic architecture, an architecture of fixed parts and variable links. Liquid architecture is an architecture that breathes, pulses, leaps as one form and lands as another. Liquid architecture is an architecture whose form is contingent on the interests of the beholder; it is an architecture that opens to welcome me and closes to defend me; it is an architecture without doors and hallways, where the next room is always where I

need it to be and what I need it to be. Liquid architecture makes liquid cities, cities that change at the shift of a value, where visitors with different backgrounds see different landmarks, where neighborhoods vary with ideas held in common, and evolve as the ideas mature or dissolve» (NOVAK 1991, 250-1). For Novak cyberspace and architecture are almost identical: «Cyberspace is architecture; cyberspace has an architecture; and cyberspace contains architecture» (idem, 226). Liquid Architecture is even characterized by an «excess of possibility» (idem, 244).

It's not entirely surprising that Novak explicitly refers to Constant's New Babylon, quoting Constant designating New Babylon as a «netlike pattern», an «abundant manipulation of colour, light, sound, climate, by the use of the most varied kinds of technical apparatus», characterized by the «shaping of the interior at any given moment», in which «one can wander for prolonged periods through the interconnected sectors, entering into the adventurer afforded by this unlimited labyrinth» (idem, 247).

When we look at the present state of Virtual Reality again we must acknowledge the gap that exist between vision and reality. Even the most advanced virtual reality systems today, such as the CAVE, are only a bleak shadow of the liquid architecture mentioned by Novak. However, when we take a look at desktop virtual reality, as we find it in online worlds like Second Life and in nonlinear and nonfinal online games that are designed and modified by the players, we enter a world that in many respects resemble the way New Babylon is being constructed in the Constant's vision, as an Architecture without Architects. For that reason it's not entirely a surprise that in recent years game designers and game theoreticians often refer to Constant. For example, in 'New Babylon Reloaded. Learning from the Ludic City' Lukas Feireiss writes: «The 'play architectures' in the latter [i.e. worlds like Second Life] are open in principle and develop without a central game designer. Here, in the ludic space of computer game worlds, something is happening that Constant earlier envisioned in his design for the ludic city. His description of the New Babylonians very much applies today's game designers and players: 'They wander through the sectors of New Babylon seeking new experiences, as yet unknown ambiances. Without the passivity of tourists, but fully aware of the power they have to act upon the world, to transform it, recreate it' (CONSTANT 1974).» . (FEIREISS 2007, 220).

3. Between possibility and reality

When we overlook the discussion of the three different though related meanings that I have given to 'database architecture', we might call New Babylon the ultimate dream of 'database architecture', as it seems to encompass and synthesize these three different connotations: computer aided design, ambient architecture and virtual reality. It's a vision of a hybrid world, built of real and virtual elements, as much a real virtuality as a virtual reality. It's a world of

infinite possibilities and play, created by and in a new kind of liquid architecture for which the title 'Art of the Possible' seems to be most apt. In a way New Babylon seems to be a dynamic version of another spectacular architectural vision that has been formulated in the middle of the twentieth century: Jorge Luis Borges' 'The Library of Babel', that contains all existing and possible books.

On the surface, the liquid 'database architecture' of New Babylon seems to reflect what Zygmund Bauman has called the «liquid modernity» of our present world. New Babylon may be the ultimate expression of this world of ever accelerating change and increasing flexibility. However, we should realize that the freedom in New Babylon is not unlimited. Much is possible in the construction of New Babylon, but evidently not everything. Notwithstanding the «excess of possibility», even as a phantasmatic thought experiment New Babylon is characterized by constraints of various kinds (cf. DENNETT 1995, 118ff.). First of all, there are logical constraints. Though the liquid architecture of New Babylon might be extremely flexible - and logical possibility is extremely generous ontologically, especially in the virtual domain - it cannot transgress the basic laws of logic. It is logically possible that in New Babylon - to quote Novak once more - «the next room is always where I need it to be and what I need it to be», however, we cannot have the next room and not have it at the same time, to mention one simple example of logical impossibility. And insofar the domain of New Babylon overlaps our physical world, it may defy, but not contradict the basic laws of physics. Not everything which is logically possible, is physically possible. From a logical perspective there are no obstacles to imagine a building floating on thin air; from a physical perspective it might be hard to realize. And if liquid architecture also implies included organic architecture - architecture that 'breathes' as Novak suggests (NOVAK 1991, 250) -, it cannot contradict the basic laws of biology concerning development, growth, metabolism and reproduction. Not everything which is physically possible is biologically possible! And finally, there are historical constraints, which apply both to nature and culture and which are closely connected with path dependency. A flying horse might be possible biologically, but from an evolutionary perspective, it is very unlikely that it will emerge from the present species horse. «Historical impossibility is simply a matter of opportunities passed up» (cf. DENNETT, 1995, 118ff). Also in the history of architecture there are clear historical constraints. Even in New Babylon this will be the case, at least for finite creatures like human beings.

Perhaps the most important constraints regarding the amount of freedom and possibilities in New Babylon are anthropological in nature. The question is whether infinite play and possibilities are apt for finite creatures like man. In order to clarify this question, I will refer to the philosophical anthropologies of Heidegger and Plessner, that both have been presented at the end of the twenties in the last century and that both have a special relevance for architecture. Although they differ in many respects (which have led to highly critical remarks to-and-fro), they both have their starting point in human finitude (cf. DE MUL 2004).

Of course, the finitude of man is not an exclusively modern theme. It already played a prominent role in the thinking of the Middle Ages. However, as Odo Marquard has shown, in modern philosophy there has been an important shift in the meaning of the concept. Where the finite, in contrast to a transcendent God, was first understood as that which is created – that is to say, that which does not have its ground in itself – in modern secularized culture it is defined immanently as that which is limited in space and time (MARQUARD 1981, 120). A crucial difference between Plessner and Heidegger lies in the fact that in their reflection on man they depart from different dimensions of finitude. In *Being and Time* (SEIN UND ZEIT, 1927), Heidegger takes finitude in time as his point of departure. In this context finitude is primarily understood as mortality and the human way of being (DASEIN, literary translated: there-being), characterized by the awareness of this mortality, consequently is defined as a Being-unto-death (Sein zum Tode). In the *Stages of the Organic and Man* (Die Stufen des Organischen und der Mensch, 1928) Plessner's point of departure, however, is finitude in space, in which finitude is primarily defined as positionality and human life, in its specific relation to its positionality, as eccentric (exzentrisch). Let me explain what these accounts of human finitude imply for architecture in general and for New Babylon in particular.

For Heidegger an important starting point is that human beings (Heidegger speaks about human Dasein, there-being) distinguish themselves from non-living nature and other animals because they don't have fixed characteristics. As human beings we exist in time, which means that, while we live are living in the present, we are always oriented towards our future possibilities. This ontological status enables us to imagine non-existing worlds and states of being. Without human creativity, New Babylon included, would be unthinkable. However, Heidegger also emphasizes that at the same time we are always constrained by the possibilities we have realized in the past. In a concise formula Heidegger calls man a thrown project (geworfenes Möglichkeit) (HEIDEGGER 1979).

This does not mean, however, that thrownness and projectivity are always in balance. In Western culture since the age of modernity there seems to be a growing dominance of the projective dimension of our existence above our thrownness. In the modern era man understands himself predominantly as an autonomous, free acting subject. The modern subject can be conceived of as a *Homo volens*, that shapes her life autonomously. Modern technology has given this autonomous subject powerful means to increase her power to choose and act. Whereas in the premodern culture most choices – your life partner, occupation, religion – usually were made for you, as a modern subject you continuously have to choose. Whether it concerns the simple choice between the left or right door in a computer game or the choice for a certain life style, every time the emphasis is on the volitional dimension of our personality. As we already noticed with Zygmund Bauman, this leads to an growing flexibilization and liquidification of our world and ourselves.

However, because our human existence is not fixed, but always have to be realized in the future, in *Building Dwelling Thinking* Heidegger also emphasizes the homelessness of human Dasein. The more our world and our selves becomes liquid, the more radical our homelessness becomes. This lead Heidegger in 1951 – Germany was still partly in ruins – to make the following provocative statement: «We are attempting to trace in thought the nature of dwelling. The next step on this path would be the question: what is the state of dwelling in our precarious age? On all sides we hear talk about the housing shortage [Wohnungsnot], and with good reason. Nor is there just talk; there is action too. We try to fill the need by providing houses, by promoting the building of houses, planning the whole architectural enterprise. However hard and bitter, however hampering and threatening the lack of houses remains, the real plight of dwelling does not lie merely in a lack of houses. The real plight of dwelling is indeed older than the world wars with their destruction, older also than the increase of the earth's population and the condition of the industrial workers. The real dwelling plight lies in this, that mortals ever search anew for the nature of dwelling, that they must ever learn to dwell. What if man's homelessness consisted in this, that man still does not even think of the real plight of dwelling as the plight? Yet as soon as man gives thought to his homelessness, it is a misery no longer. Rightly considered and kept well in mind, it is the sole summons that calls mortals into their dwelling» (HEIDEGGER 1975, 161).

In developing his New Babylon project, Constant seems to give thought to the radical homelessness of human Dasein. The popularity of Constant among architects like Rem Koolhaas, Alison and Peter Smithson and Peter Eisenman seems to be that in New Babylon they recognize this expression of the radical homelessness of modern man (VAN OOSTEN 2004). Their enthusiasm for his 'database architecture' is understandable as far as New Babylon expresses the radical freedom that is connected with the radical homelessness. However, for mortal beings that are thrown in their existence this radical freedom is also experienced as a radical form of alienation and rootlessness. Cyberspace as a realm of pure possibility, that is: as a non-place in the most radical sense of the word, is inhabitable for human Dasein.

In *Stages of the Organic and Man* Helmuth Plessner arrives at a comparable conclusion in his analysis of what he calls the Stages of the Organic and Man «eccentric positionality» (exzentrische Positionalität) of human beings. Like Heidegger, Plessner stresses the finitude of human being, but in contrast to Heidegger, Plessner puts all emphasis on the spatial dimension. According to Plessner living creatures distinguish themselves from the lifeless because they not so much possess contours but are characterized by a boundary (Grenze), and consequently by traffic between both sides of this boundary (Grenzverkehr). Moreover, living creatures are characterized by a specific relationship to their boundary, that is, by a specific form of positionality.

The manner in which positionality is organized determines the difference between plant, animal and human being. In the open organization of the plant, the organism is not yet in a rela-

tionship to its positionality. Neither the inner nor the outer have a center. In other words, the plant is characterized by a boundary which has no-one or nothing on either side, neither subject nor object (PLESSNER 1975, 282ff.). A relationship with its own positionality first appears in the closed organization of the animal. In the animal that which traverses the boundary is mediated by a center, which at a physical level can be localized in the nervous system, and at the psychic level is characterized by awareness of the environment. As distinct from the plant, the centered animal is not only a body, it is also in its body. The human life form distinguishes itself from the animal because man also maintains a relationship with this center. Although man also (always) takes up a centrist position, he has a specific relationship to this center too. There is therefore a second mediation: man is aware of his center of experience and is, as such, eccentric. «Man not only lives (lebt) and experiences his life (erlebt), but he also experiences his experience of life» (Idem, 364). «A living person is a body, is in his body (as inner experience or soul) and at the same time outside his body as the perspective, from which he is both» (idem).

Man is both centric and excentric. As a centric being he is aware of a reality beyond the boundary that distinguishes him from the world. However, as an eccentric being, he is not only aware of reality, but also of that which is possible. Man is always beyond reality and in a sense has always lived in a virtual reality. Thanks to language we can imagine all kinds of non-existing worlds, from fairy tales to Second Life and New Babylon. Thanks to his eccentricity man is the creative animal. However, this also implies that man, unlike other animals, never coincides with the reality (s)he's in. (S)he is characterized by a 'constitutive homelessness' (idem, 309). «As an eccentric being man is not in an equilibrium, he is without a place, he stands outside time in nothingness, his constitution lacks a fatherland (konstitutiv heimatlos). He always still has to become 'something' and create an equilibrium for himself» (PLESSNER 1975, 385). Man has a constitutive desire for a place that promises him rest, stability, shelter and identity. In short: which promises him and her a home. On the basis of this anthropological analysis of the eccentric positionality Plessner formulates three 'anthropological laws', which are highly relevant to architecture .

The first one is that man is artificial by nature. Man tries to escape the constitutive homelessness by creating an artificial home. «Man tries to escape the unbearable eccentricity of his being, he wants to compensate for the lack that constitutes his life form. Eccentricity and the need for complements are one and the same. We should not understand 'need' in this context psychologically or as something subjective. It is something that is logically prior to every need, drive, tendency or will. In this fundamental need or nakedness we find the motive for everything that is specifically human, the focus on the unreal and the use of artificial means, the ultimate foundation of the technical artefact and that which it serves: culture» (PLESSNER 1975, 385). And from the dawn of mankind within culture architecture has literally played a crucial role in the satisfaction of this longing for a place to live, a home.

However, according to the second anthropological law, which Plessner called the law of mediated immediacy, the artifacts created by man acquire a certain independency. Man creates culture and technologies, but as soon as cultural artifacts and institutions exist, they start to determine man as well: «Equally essential for the technical artifact is its inner weight, its objectivity that discloses the aspect of technology that only can be found or discovered, but never made. Everything that enters the sphere of culture shows its dependence on human creation. But at the same time (and to the same extent) it is independent from man» (PLESSNER 1975, 397). As a result, culture and technologies themselves become alienating forces that stimulate man again and again to create new culture that again and again promises to offer him a home, in the end. Hence a never-lasting historical development of architecture. However, man is denied ever finding this home. For a creature whose existence is characterized by a fundamental homelessness, this hope is necessarily a blind hope and therefore in vain.

This should not be surprising given Plessner's third anthropological law, that of utopian standpoint. Again and again, culture promises man to give him a home. However, the promise to provide that which by definition man must do without - «safety, reconciliation with fate, understanding reality, a native soil» - (PLESSNER 1975, 420) - can be no other than a religious illusion. The fact that for many people in a secular societies political and technological ideologies have taken over the Utopian role of religion does not make this law any less valid.

4. New Babylon revisited

How should we evaluate the database architecture of New Babylon, from this anthropological standpoint? Is it a utopia that we should distrust because it promises us something we cannot find? In a sense it is, because as an imaginary project it is literally a utopia, a non-place.

However, we should not draw this conclusion too quickly. From the very beginning Constant has declared that New Babylon is not a utopia, but a realizable project. Moreover, New Babylon definitely does not promise us a home. At least not in the classical sense of the word. New Babylon celebrates the human eccentricity and creativity. In its celebration of the nomadic lifestyle it takes the radical homelessness of human existence seriously. Perhaps a little bit too seriously.

However, it is remarkable that in the first years of the project the maquettes, drawings etc. of New Babylon hardly showed any inhabitant. In a lecture on 23 May 1980 at the school of architecture at Delft University, Constant summarized his retrospective thoughts on New Babylon as follows: '... it is possible to form a fairly clear idea of an as yet uninhabited world. It is more difficult to populate this world with people who live so very differently from our-

selves: we can neither dictate nor design their playful or inventive behavior in advance. We can only invoke our fantasy and switch from science to art. It was this insight that prompted me to stop work on the models and to attempt in paintings and drawings, however approximately, to create some New Babylonian life. This was as far as I could go. The project exists. It is safely stored away in a museum, waiting for more favorable times when it will once again arouse interest among future urban designers» (Witte de With. Center for Contemporary Art 1998).

In Constant's *New Babylon: the hyper-architecture of desire*, Wigly interprets the absence of human figures in the first presentations as a polemical gesture. However, he also notices that in the course of the further development of the project, when the drawings started to dematerialize shadowy figures began to appear: «Eventually they become the center of attention, with New Babylon just a few intersecting planes in the background, but they remain vague – and vulnerable. In one of the early drawings of 1960, a few stick figures appear in the space, their spindly bodies resembling the ladders in front of them. Two years later, a few blotchy figures can be seen, suspended above us or running through the space, only to return with a vengeance in 1965 when they completely fill the spaces that are now no more than a few quick lines. Hundreds can be seen in restless crowds on the multiple levels, or dispersed across the ground blow. But they are till ghosts in a space that is itself phantomlike. Discrete figures finally come into focus against a few diaphanous planes in 1968. But their blotchy from now looks like blood stains. Any doubt is removed when they become red. There is a sense of ongoing violence. As we finally get close to the figures, close enough to make out faces, they have been piled up or are splattered across every surface as if there has been horrific carnage. Human life becomes just a stain of extinction» (WIGLEY 1998, 69).

In his 1974 retrospective, Constant reaffirms that New Babylon is no utopia, in the sense that it will not necessary be a peaceful place: «From Homo Faber's point of view, New Babylon is an uncertain universe in which the 'normal' man is at the mercy of every possible destructive force, every kind of aggression. But let us note that 'normality' is a concept linked to a certain historical practice; its content is therefore variable. As for 'aggressivity,' psychoanalysis has granted it considerable importance, going so far as to define an 'instinct' of aggression. The area of study thus found itself reduced to the man who struggles for his existence, to the human being engaged in that immemorial combat he, like other species, is still engaged in. The image of a free man who does not have to struggle for his existence is without historical basis. The instinct of self-defense has also been postulated as the primordial instinct of the human being, and of all that lives. And it is to that instinct that all the others are related» (CONSTANT 1974).

We can read Constant's repeated statement that New Babylon is no utopia in yet another way. It might be a realizable project, but not for man as he presently exist. As enlightened

mortals, we might be too late for utopian hope. In emphasizing the nomadic homelessness of the New Babylonians, Constant's grand vision is an effective antidote for the blind hope that we will ever find a final home. However, being the finite, eccentric creatures we are, we cannot live without this blind hope (cf. DE MUL 2009).

We might be past a religious or secular metaphysics that promise us a home, but we are certainly not ready for dwelling in cyberspace yet. Thus the problem is not so much that New Babylon is far beyond what can be built, but rather far beyond what is livable for finite, analogue creatures like us. In order to be able to live in the pure virtuality of cyberspace – virtuality not in the sense of 'not real' but in the sense of 'sheer possibility' – we should become another kind of being. Perhaps the greatest challenge for architecture in the twenty-first century is to create the habitat for those who will succeed us in the evolution of life on earth. But we should not forget that in doing so, we are organizing a party for which, ultimately, we will not be invited (DE MUL 2001).

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