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Bart Lootsma

Body and Globe

Dwelling in an age of radical mobility

‘Man in Space!’ announced the headline of the newspaper *Dimanche* on November 27, 1960. That must have attracted its share of attention at the time. The subtitle read that an artist had leaped into the void. What we see in the picture is a man in an ordinary business suit who is leaving the window of an ordinary suburban Parisian house in an upward movement, as if he were Superman, in such a hurry to save the world that he has even forgotten to change clothes. In other photographs we see the same man, the artist Yves Klein, against a more vague background and in a pose that suggests more that he is falling rather than levitating. Of course, the newspaper was a fake, a clever imitation of the *Journal de Dimanche*, the Sunday edition of the Parisian daily *France Soir*. But this will certainly have escaped many Parisians that were still rubbing the sleep out of their eyes.

In 1965, Friedrich Kiesler displayed a group of sculptures entitled *US, YOU, ME* that he had just finished in the Museum of Art of the University of Iowa. It was one of his last works and I am not so sure if I find it one of his best. But, with the text that accompanies it, it almost works like a testament. Among the many different figures that are dominated by a big ring with a gong inside, two are taller. According to Kiesler's description, "One is an image of young David, and, at the other end, is the flying figure of a man escaping into outer space."¹

Whatever one may think of them, both works refer - in a very critical way, as we will see later - to the first manned space flights that were realised in the early sixties. Klein made his jump just before the first manned space flight, Kiesler incorporated his figure escaping into outer space just after that. But apart from their criticism, both works, read in relation to the rest of the oeuvres of the artists/architects, give us a clue about the impact space flights would have on the way we see the world - or better: how we see the earth and how we see

ourselves - and on our conception of dwelling. This impact is reflected already at an early stage in the arts and in architecture, but it continues today, even if we are not always aware of it and space flights are no longer front page news. Space flights had an impact on the way we see the body, but also on the place our body takes in in a larger whole. This also drastically changed the concept of architecture. It became radically footloose and lost the aspect of marking the ground, focussing more on the physical aspects of providing shelter or, even more: providing bodily comfort and connections to infrastructure. Both the positions of Kiesler and Klein can be used to paint a possible alternative history of recent architecture.

Mirror stage

The first space flights could be interpreted as a kind of mirror for the world - literally, if we see how radio waves are bounced back by satellites and especially when we realise that space flights made it possible for the first time to see the earth as a whole. The Global Positioning System with its 24 geostationary satellites makes it possible to localise every place on earth instantly.

For Jacques Lacan, the mirror stage is a crucial phase in the psychological development of a child. It is a phase that occurs between the first 6 and 24 months of its existence, in which it recognises itself for the first time in its mirrored image and identifies itself with it, to such an extent even that when one would call its name, it would look at the mirror instead of reacting from inside. Before the mirror-stage, the child can only see and feel parts of its body. It prefers the mirrored image, because it gives a total image. In retrospect the body as it was experienced before the mirror-stage appears as a fragmented body, a *corps morcelé*. The mirror image is the foundation for an identity, because it is also an identification with something that is not the child. Of course it is not the Other either, but the identical Other. The mirror-stage marks the initiation to the imaginary order that is connected to the image. Around the same time the child is introduced to the symbolical order that is language. It receives a name that it identifies with, and it discovers that everyone is different, just as it also gets confronted with the taboos and rules of society.²

If space flights changed our perception of the world, they certainly changed the perception and conception of the body as well, radically, but strangely enough almost in the opposite way to the mirror stage. Seen from space, the body is not even perceptible, it is less than an ant. But in order to be able to undertake space flights, the body needed special adaptations, training and prostheses, in order to survive. The individual body became a cyborg, a cybernetic organism, a human being who has certain processes aided, controlled or replaced by mechanical, pharmaceutical or electronic devices. More than ever, the body became something that is under the influence of external forces and that adapts itself to them with technological means, a desire machine. Strangely enough, from the moment that we were able to perceive and think the earth as a whole, in a reversal movement, because of the space flights, the body became a *corps morcelé* again and the matter of identity became even more problematic than ever before. Identity became makeable, depending on will and passion, something that individuals must produce, cobble and stage together themselves in an experimental way.

Lost in Space

The *Dimanche* with the notorious article on Klein's jump in it appeared little more than three years after the flight of the Sputnik on October 4. 1957, the first satellite in space, and the Sputnik-2, on November 3. 1957, with the cute little doggy Laika aboard. It had died for lack of oxygen after a week and later burned in its thermally badly insulated capsule on April 14. 1958 when returning into the earth's atmosphere. The photographs that we know depict a similar dog, but not Laika. Ever since, the United States and the Soviet Union had been caught in a rat race to put the first man into space - and to bring him back alive, whenever possible. This battle actually reached a first climax in September and October 1960, when there were rumours that the Soviets were short before a manned flight. The excitement was caused by the flight of Sputnik-5. It had a complete zoo aboard - two doggies this time, Belka and Strelka, two rats, four mice and furthermore ordinary flies, plants etcetera - and it returned to earth, although it is unclear whether the animals survived. But even before, in August of that year, satellite spotting had become quite popular after the launch of the first American communication satellite Echo-1 that was clearly visible in the sky. Satellite

spotting would become so popular that newspapers would even print the schedules of the satellite passages like the radio programme. It was a time where everything seemed possible. Man had just proven able to split atoms and now he was already conquering the cosmos. Several years later, in 1968, Charles and Ray Eames were able to express this feeling and the joy it produced in their film *Powers of Ten*, in which we take an imaginary trip from the edge of the universe to an atom in the hand of a sleeping man. Science and technology had no limits. It must have been an experience similar to watching fireworks. It would take until April 12. 1961 however until the first successful manned flight was realised, in the Russian Wostok-1, with Youri Gagarin aboard.

If we are saying that man was able to do all this, we have to observe that it was most of all a collective effort, or better: an effort of collectives, like the Russian RNII and NASA. Of course, we remember the names of some heroes that were involved, notably the first dogs, rats, monkeys and men in space, but the conquest for space has cost the lives of many anonymous victims. Only in recent years some of them are memorised, like in the Astronaut's Memorial on Cape Canaveral that was built after a design by Holt Hinshaw Pfau Jones in 1990. It consists of a plane of black granite that mirrors the sky and into which the names of the astronauts are cut. They are lit from behind by a mirror that reflects the rays of the sun or, at night, by lamps.

But probably many of the Russian cosmonauts that have died disappeared literally, as if they had never existed. Like Ivan Fiodorovich Istochnikov, who left on a twin-flight with the Soyuz-2 and Soyuz-3 in 1968. His story is probably an invention. But who cares when we refer to a subject that was surrounded by the utmost secrecy, in a time when espionage and counter-intelligence made almost all facts questionable and photographs were carefully retouched? Remember what happened to Laika. Remember *Dimanche*. For this essay it makes no difference at all. Anyway: on his flight, Ivan Fiodorovich was accompanied by the dog Kloka, with whom he was supposed to make a space-stroll. The two Soyuz's were supposed to dock together, but failed and lost contact. "The following day when they found each other once again, Istochnikov had disappeared and his

module bore the marks of an impact with a meteorite. In fact, it is not clear what had really happened and the mystery provoked a whole series of conjunctures. But, the Soviet authorities were clear about not wanting to admit another new fiasco and they designed a Machiavellian explanation: they announced that the Soyuz-2 had been an automatic, unmanned flight. For the official record Ivan Istochnikov died from an illness a couple of months later. To contradict voices his family were confined, his colleagues were blackmailed, the archives were doctored and photographs retouched."³ His widow was sent to a sharaga, a special kind of gulag or prison for intellectuals. On her question what would happen if she would say anything, the Ministry of Defence answered her that they were concerned about her anti-communist background and anti-patriotic attitude: "What is the honour of one man, compared to the shame of an entire country? (...) We would be very sorry if you, or one of your friends, were to have an unfortunate accident. (...), don't oblige us to send you to the Lubianka (the KGB, B.L.)." ⁴

Astronauts were in the beginning no more than test dummies, literally strapped into straight jackets and space suits in which they could hardly move. These devices offered everything, like a womb: protection, comfort, oxygen, water, food, communication and devices to allow for defecation. But they also restricted the freedom of the astronauts. If they could actually move, the capsules were so small that it would hardly have made any sense. Tom Wolfe tells in his book *The Right Stuff* that the most famous American test pilots, like Chuck Yeager, actually refused to take part in the American space programme, because there was nothing they could do, nothing that a monkey couldn't do anyway.⁵ The Americans demanded at least a small window in the capsule, so that they could look out, explosive bolts in the door, so that they could open it themselves, and something with which they could steer, for example to control the position of the capsule when it would return into the atmosphere. These were installed, but the steering device appeared to make no difference at all. It was more the idea. Propagandistic issues aside, for NASA the ideal astronaut would be a cyborg. It would become a little more interesting when the astronauts would make strolls outside of the capsule. The first space flights were more experiences than actions. No one really knew what was out there and how the human body would react to zero gravity and the enormous G-forces during take-off and landing. John Glenn, one of the first Americans to make a space flight in 1962, wrote that he could actually adapt himself to weightlessness quite quickly, and that it was an agreeable experience. The pulse and blood pressure of the first astronauts were not exceptionally high or even quite normal, even during take-off and landing. Nevertheless, astronauts are subjected to heavy physical tests and exercise programmes before they can actually join a flight. We know that they exercise in centrifuges and under water. In recent years also dance practice has become a regular training method, because it gives the astronauts a better awareness and control over their body. More than the rational

identification process by means of the mirror that is outside of the body, the training of proprioception became crucial again.

Levitation

If we look back now on Yves Klein's leap and his claim to be the first man in space it becomes clearer what he was after. Klein's work is often viewed as an attempt to reconcile life with art, resembling in this respect much art of the fifties and early sixties - art that entailed an abandonment of higher realms in favour of the everyday. On consideration, however, this view is quite untrue, or the statement entails at the very least an ambiguity. While Klein co-operated with the Nouveau Realistes and was a close friend of theirs, he was not one of them - not, at least, if we are to view Nouveau Realisme as a French variant of Pop Art, a movement that specialized in appropriating banal subjects from the consumer society and bringing them into an art context. Klein's aim however was to use art as a way of bringing people into contact with a higher form of life. Life, as Klein saw it, was not at all something that mankind owned, but in the first instance something that belonged to a higher order. It was possible to gain possession of Life, however, by developing what he termed 'Cosmic Sensitivity'. ⁶

Klein's ideas were based to a considerable extent on the ideas of Max Heindel on theosophical cosmology. Klein was a member of the Rosicrucian Brotherhood for six years between 1948 and 1954, and studied and practised their teachings as formulated by Heindel. Human evolution, according to Heindel, is approaching the end of the age of form and solid matter, and soon will immerse itself in an age of Space/ Spirit/ Life that will restore the condition of Eden. ⁷ Klein's monochrome paintings are intended, through pure colour, to absorb and transport the spectator who thereby gains an intimation, albeit momentary, of total mental and physical freedom. Klein did not restrict himself to paintings as his means of offering an intimation of higher things, but pondered at many different levels about techniques for achieving greater Cosmic Sensitivity in everyday life. The word *techniques* is meant literally here. It sometimes looks as though Klein, in his impatient longing, set technical progress on a par with spiritual transcendence. In this light it was no more than logical that, in the late fifties, he should turn his hand to architecture as offering a more comprehensive spatial experience. Together with architect Werner Ruhnau, he developed plans for an *air architecture*. The concepts entailed the climatic conditioning of large parts of the earth's surface, use being made of the elementary energies of air, water, and fire. The plans of Klein and Ruhnau can be seen as an expression of a longing for an immaterial architecture that would not only offer absolute comfort but would also bring its inhabitants to a higher state of consciousness. Klein saw *air architecture* as a potential way of using technology to create a paradise on earth, an Eden, where mankind could walk naked: "The technical and scientific conclusion of our civilisation lies buried in the bowels of the earth and assures comfort by the abso-

lute control of the climate at the surface of all the continent."⁹ The simplest principle of air architecture entailed a roof of air fed by bellows. This would create a zone that would protect against rain, dust, and electrical phenomena, while still being transparent to ultraviolet and infrared radiation and thus allowing the warmth and light of the sun to penetrate. A subterranean air-conditioning system was proposed to regulate the temperature of the earth. In executing their plans, the architects would make the most of the given natural circumstances. In a valley, for instance, it ought to be possible to use a stream of air to cover off the entire space between the two slopes. The space of the individual person would be conditioned by compressed air. In this area, Klein devised among other things an *air bed*, a mattress of compressed air on which one could lie and relax. The flow of air would also continually massage the body. Air architecture, it was proposed, would instigate a Planetary Sensitivity, the eventual goal being Universal Levitation: "Man's will can finally regulate life at the level of constant wonders. The free man has reached a point where he can even levitate!" "Thus we will become aerial man, we will experience the force of attraction upward, toward space, toward nowhere and everywhere at the same time; the force of earthly attraction thus mastered, we will literally levitate in total psychical and spiritual freedom."⁹

Seen in this light, Klein's action was the complete opposite of what was happening in the technological conquest of space. As he wrote in *Dimanche*: "Today anyone who paints space must actually go into space to paint, but he must go there without any faking, and neither in an aeroplane, a parachute nor a rocket. He must go there by his own means, by an autonomous, individual force; in a word, he must be capable of levitating."¹⁰ Klein's preoccupation with levitation continued through the last years of his life. "He kept practicing breathing exercises and never abandoned the idea of body elevation in a public space. As a result of his development of the leap into the void, (and in strange contradiction to his claim that there should be no faking, B.L.) he became enamored with the possibilities of photomontage imagery and other manifestations of space travel."¹¹ One of these photomontages shows Klein sitting on the floor, contemplating the apparent levitation of the globe in his work *Le globe terrestre bleu*. Other works, the *Blue planetary reliefs* from 1961 show kinds of landscapes as seen from outer space. Both in the way he used his own body and investigated that in works of art as well in these planetary reliefs and globe, Klein captured an awareness of a new perception of the body and earth as it was triggered by space travel. This specific awareness preceded many works that were to come, be it without the cosmological implications Klein attached to them. The body itself became the focal point and as such became a tool to question, criticise and transgress architecture from within, whereas the contemplation of the earth from outer space gave another meaning to place, as it became part of a larger whole.

The Endless House

When Kiesler produced his group of sculptures *US, YOU, ME* in 1965, and singled out the flying figure of a man escaping into outer space, the first manned space flights had already really taken place and the rat race for the conquest of space between the USA and the USSR was at its climax. In his explanation of the project, Kiesler was very clear about the criticism he wanted to express with it. "The root of the composition is a deep feeling of mine that most people in the western world are immensely active, primarily with the purpose of accumulating tangible wealth, and see in possessions the varied securities of life. This large composition of sculptures shows people rushing about, singly or in groups, most of them without torso and head, only with their feet dashing about. They go to offices, they rush to lunch, they hurry back, and, in rush hour you can see the scramble and tumble of the masses on the streets, in the subways, in the buses, jammed into their cars, only to repeat, day after day, year after year, life after life, the same mad hustle and bustle to earn money; property, houses, cars, investments, to secure their survival in case of economic crashes. Nothing is done in depth because they cannot catch depth like a billfold, and deposit it in their bank accounts. They don't realise that every human being is an island born to itself and is its sole keeper. He is both the creator and the gardener of that ever-blooming flower island, glowing in the darkness of his inside."¹² And then, in a sentence that almost ridicules the conquest of space and the moon, he exclaims "Yes! The human body is the most extraordinary universe. It is the summa summarum of the planets. How poverty stricken, by comparison with the human being, is our Earth, without a will of her own, subject to innumerable influences, from hard rocks to invisible forces, living in all its details, from birth to death, from death to birth, and the intervals are called life."¹³ So, Kiesler also fell back on the body. But for him the body was more than just an isolated entity. It was part of and symbol for what he called the *Endless*. "All ends meet in the *Endless* as they meet in life. Life's rhythms are cyclical. All ends of living meet during twenty-four hours, during a week, a lifetime. They touch each other with the kiss of Time. They shake hands, stay, say goodbye, return through the same or other doors, come and go through multi-links, secretive or obvious, or through the whims of memory."¹⁴ Therefore he designed the *Endless House*, that is "endless like the human body - there is no beginning and no end to it. The *Endless* is rather sensuous, more like the female body in contrast to the sharp-angled male body."¹⁵ The *Endless House* looks like something that has grown organically, a continuous space from which nevertheless individual, smaller spaces can be secluded. According to Kiesler, nature creates bodies, but art creates life, that the inhabitants have to reinvent constantly. Therefore the *Endless House* is a space in which nothing is taken for granted. There is no clear distinction between floors, walls, and ceilings. Mechanical devices event and must constitute the inspiration for a specific ritual. It is, in Kiesler's words "the last refuge for man as man".¹⁶

Capsules, suits and megastructures

Space capsules and space suits are the most elementary architecture one could imagine. The functions of a space capsule or space suit are exactly the same as those of architecture: offering comfort and protection in a hostile environment and a connection to an infrastructure of water, gas, sewers, communication, and transport. There is only one difference: the astronaut carries the capsule and the suit with him like a snail, or better: a shell. He moves in and with his house and is completely dependent of technology. He is not bound to a place, but is the centre of the universe. Maybe the most difficult aspect for the first astronauts was the loneliness up there, and many of them tried to smuggle aboard at least some small insects or objects to keep them company. If we may believe it, our friend Ivan Fiodorovich took, apart from Kloka and a small foldable chess-set, a vodka-bottle with him, that he would throw into space with an SOS message if anything went wrong. Russian instructors would tell their trainees in all seriousness to do so in such cases, and then patiently wait for rescue.¹⁷

Of course, the space capsule and the suit fascinated architects from the start. In the nineteen sixties, capsules appeared in architectural proposals everywhere. They became the individual unit and urbanism would be the almost endless addition of it, providing infrastructures where they could temporarily settle. But the ways in which these capsules were reflected upon were very different.

The British Archigram group was the most explicit about this. "From whatever side one may look at it: the space capsule was our source of inspiration", they wrote in retrospect.¹⁸ But it was not just the space capsule they were interested in, not the scientific precision. It was also a place for new rituals and, most recently, Peter Cook characterised the work as "Kiesler meets the space capsule".¹⁹ Archigram recognised the space capsule as something radically different from anything that preceded it and offering a much greater performance. Their architectural answer were the *Capsule Homes*, designed by Warren Chalk in 1964. It was a completely new concept of dwelling in the form of a capsule with the same overfunctionality and sophistication as a space capsule. The parts would be tailor-made, industrially produced, reflecting the level of contemporary technology and easily exchangeable when the desires of the inhabitants would change. Archigram focussed on capsules in relation to comfort, mobility and infrastructures, such as *Plug-in City*. In an apology to Le Corbusier, the said called the house a device that one carries around, and the city a machine to plug it into.²⁰ Many of their proposals kept the middle between camping and space-travel, like Michael Webb's *Cushicle* and *Suitaloan*, devices that kept the middle between a tent and a space suit from 1966 and 1968. And already in 1965 Rainer Banham and Francois Dallegret drew their *Un-House*, a kind of balloon with a television and a stereo set in the middle in which they depicted themselves naked "thus unconsciously illustrating McLuhans statement that in the television age we have all mankind as our skin."²¹

In Archigram's optimistic view, technology opened the doors to a future dedicated to pleasure and comfort. Technology was for them the *Excessive Machine* in the science fiction movie *Barbarella*: a machine which tries to kill *Barbarella* with pleasure, but impotently blows its fuses instead, thus giving her opponent O'Shea the opportunity to say the, according to Reyner Banham, best line in the script: "Have you no shame?" This 'triumph of software', as Banham called *Barbarella*'s heroic shamelessness, gave Archigram a free ticket to speculate about all the positive possibilities technology has to offer.²²

Mind Expanders

In Austria, architects seemed to be much more interested in the corporeal and psychological effects and consequences of the capsule and the suit. Hans Hollein and Walter Pichler, Haus Rucker Co and Coop Himmelblau knew about Kiesler - a former fellow countryman- from first hand and many of them even visited him in New York by the end of the fifties or in the early sixties when he was working on the Endless House. A lot of their earliest work is formally clearly inspired by it. But apart from Kiesler, they were very much inspired by Marshall McLuhan, Timothy Leary, Wilhelm Reich and the French existentialist philosophers as well. McLuhan sees in *Understanding Media* art as an ideal antidote to the amounts of information that people are bombarded with. Or rather: he hoped that a certain kind of artistic multimedia environment could immunise the people against the increasingly aggressive way they were taken under fire by their *extended faculties*. The artist could show us, like a boxer, "how to ride with the punch instead of taking it on the chin".²³ It was a strategy comparable to the way astronauts were trained for their space flights. Very different from Archigram, whose proposals never left the drawing board, they realised many of their proposals in the form of temporary installations and working prototypes.

Crucial here was the role of Hans Hollein and notably Walter Pichler. Just like Archigram, Hollein and Pichler, in their first exhibition *Architektur* in 1963 in Vienna, incorporated a visual panorama of rockets, fashions, architectural history and technology, but they drew very different conclusions from them. They drew and modelled cultic subterranean cities, monumental city centres and buildings for communicational purposes with an almost gloomy and overly repressive and totalitarian atmosphere, that was even more emphasized in their texts.²⁴ When staying in New York in 1964, Pichler would work as a graphic designer for the MOMA, in which capacity he would make a Children's book in which pictures of technological devices from National Geographic and Scientific American were placed in visual relation to historic architecture and cult objects.²⁵ Much more interesting maybe were the *8 Prototypes* Pichler developed a couple of years later and that were exhibited in the Galerie Nächst St. Stephan in 1967. Apart from cultic objects with a strong sexual overtone, furniture and drawings for suits, he presented the *Grosser Raum* (Large Room), a balloon reminding of

Banham and Dallegrets *Un-House*, but were the multi-media equipment was replaced by a more mysterious shrine, the *Kleiner Raum* (Small Room), and the TV Helmet (Portable Living Room). The latter two were meticulously made prototypes for apparatuses that were clearly thought for mass production. The Small Room was a kind of helmet that changed the head of the bearer into something that looked like a radio in the most modern design, consisting of two intersecting balls. By means of a built-in microphone ones speech was amplified by an external speaker system. Small holes, as where normally a loudspeaker would be hidden, made it possible to see the surroundings without being seen oneself. The TV Helmet was the exact opposite of this. Here the bearer was completely isolated from his surroundings, his only view being a small TV screen. The longitudinal shape of the design gave it a precise direction, that produced associations with Marcuses *One Dimensional Man*.

The writer Oswald Wiener dedicated a special appendix to Pichlers installations and drawings - notably for the *Intensivbox* from 1967 - in his book "Die Verbesserung von Mitteleuropa" from 1969. Here he expanded Pichlers fantasies to an apparatus that would liberate consciousness from its organic and psychological base within the human body: "It offers the chance of the century: the liberation of philosophy by technology. Its purpose is to substitute the world by taking control of the "found environment" which has, so far, proved utterly inadequate as a transmitter and receiver of vitally important messages (food and entertainment) and by responding more fully to individual needs than the now outmoded "universal" environment generally referred to as the natural environment has hitherto succeeded in doing. (.....) the bio-adapter now controls the physical and mental states of its 'cargo' right down to the very last detail. In other words, it has taken the place of the state and can now move on to the expansion (improvement) of the bio-module's consciousness. The bio-adapter requires only a minimum of anaesthetic, as it can connect all afferents to its own stimulant transformer: for example, while a leg of the bio-module is being amputated, it may be enjoying a refreshing walk through delightful Hungarian scenery. The adapter simulates the complex interaction of afferent nerves with kinaesthetic and proprioceptive fibres and a glance at his legs merely tells the bio-module that his pleasure in movement is stimulating his limbs. The process is assisted by the superior processing speed of the adapter electronics, for the adapter is able to recognise errors by means of centrally located control sensors and revoke them before they reach the consciousness of the bio-module. (...) Consciousness, this cuckoo's egg of nature, thus represents nature itself. Whereas previously the forms of sensory perception were simply products of the conditioned reflexes of a superior order of experiment, ghosts of the human sense of chance (...), high quality products of the social process, monstrous prodigies of language, now consciousness rests, immortal, within itself and creates transient objects from its own depths."²⁶ Here, the consequences of taking the mentality of space travel seriously

and projecting them onto architecture were taken to their limits. The image that comes up reminds one of the outline of human development Paul Virilio would give more than twenty years later in his *L'inertie Polaire*, where he envisages man as an inert invalid in a perfect cockpit.²⁷

Interesting in Wieners description is the aspect of simulation. Space travel produced a boom in simulation technology. Most of the reality of space travel was experienced second hand of course and not only that, but as Tom Wolfe put it, the most important result of it was that it opened up to an era of preconceived experiences. It seems that Alan Shepard, during his first Mercury Flight, experienced nothing new after all the simulations he went through and was even a bit disappointed: reality did not feel realistic.²⁸ The chief designer responsible for the development of the NASA simulation programme, Joseph LaRussa, had the official task to make the most perfect visual simulations of the real flights. In doing that, NASA realised a project, as far as it was possible, that had occupied artists from the Renaissance up to Modernism, writes Christoph Asendorf: "The simulator has achieved the image maker's long, long dream of creating a three dimensional window into space, a window through which the illusion approximates reality."²⁹

According to Asendorf this put the physiological simulators in the shadow - but that is not completely true. Notably the other Austrian groups, Haus Rucker Co and Coop Himmelblau, were in the first place interested in the completely psychophysiological aspects and implications of a new, completely artificial technological architecture. Haus Rucker Co's *Mind Expander* (1967), *Gelbes Herz* (1967/68), the *Viewatomizer* and the *Environment Transformers* (1968) used helmets, spectacles, light, sound and pulsating multicoloured transparent membranes to create joyful psychedelic experiences - the early installations of Coop Himmelblau did the same.

The Global Scale

The Italian Groups Archizoom and Superstudio were much interested in the relationship of building on a global scale versus the individual with his personal equipment, as it was most clearly expressed in Archizooms *No-stop City* from 1970: a kind of giant climatised parking garages in which the inhabitants would move around their mobile furniture and equipment. In *The Hot House* Andrea Branzi states that "In opposition to the purely formal utopias of the Archigrams and the Japanese Metabolisms, which clung to the old idea of a Machine Civilization by proposing a mechanical architecture and metropolis, the Italian groups conceived of a critical utopia, in so far as their use of a utopian system was purely cognitive and represented a level of clarity beyond that of reality itself. This was an instrumental, scientific utopia, one that did not put forward a different world from the present one, but rather presented the existing one at a more advanced level of cognition."³⁰ This was notably the case in Superstudios *The Twelve Ideal Cities* from 1971. In the first city of that cycle, the

City 2000t, people would live in cells with all possible infrastructure. A computer would balance all the individual needs and desires in a perfect way. The inhabitants could revolt three times against the system, before the ceiling would come down with a weight of 2000 tons, to clear the cell for a new inhabitant. Even though most of their work is much more based on an extrapolation of the tendencies they saw in building technology, notably the global view, as most explicitly expressed in Superstudios *Monumento Continuo*, a grid encompassing the whole world, must have been inspired by the view from outer space.

Spaces of performances

In his leap into the void, Yves Klein was one of the first artists to use his own body in a work of art. Before using his own body, he had already used women that he smeared with paint to produce paintings in the context of a ritual. Of course, as we realise today, body art has a longer and much broader history starting at least with Marcel Duchamp and maybe even going back on the first presentation of Manet's *Olympia*, with two bodyguards standing next to it. Independent from Klein, by the end of the nineteen fifties, in painting, and notably in abstract expressionist painting, the corporeal gesture had won importance to such a degree that this gesture became the crucial aspect of the work. As a consequence, painters like Karel Appel and the Austrian Hermann Nitsch had themselves filmed while they were working. Arnulf Rainer had himself photographed while he pulled faces in order to find a different mode of non-verbal communication that he thought was lost in the process of civilization. In the United States, Allen Kaprow began to make *live art* that he called happenings, while others, like Robert Morris produced a specific kind of sculpture in which he explored the relation between architectural objects and his body. For the purpose of this article, which tries to investigate the new relationship between the body and a larger whole - the earth as a whole, or even the cosmos - I am however mainly interested in a specific reading of the history of body - and performance art, that is in what this increased interest in the body did or might have meant to architecture and urbanism.

In the course of the nineteen sixties, performance art was established as a new art form. All aspects of the body were investigated: from the body as a body to matters of personal history, gender, rituals, the relation to architecture, the relation to other bodies and so on. It seemed as if in a period in history in which, by the influence of technology, the body was almost reduced to an anonymous dummy, artists rediscovered it as the basis of existence and they started measuring the world by means of it. Artists seemed to go back to the phase before the alienating, estranging mirror stage and started to find a new coherence in the world starting from there. The body became a space in itself, it moved in space, extended in space, conflicted with space, it loaded space with meaning and energy. In other words: it created space by itself.

This creation of space by the body often conflicted with architecture, as in the performances of Charlemagne Palestine and notably Ulay and Abramovic. In *Expansion in Space*, a performance carried out at the Documenta 6 in Kassel in June 1977, Abramovic and Ulay installed two mobile columns between the existing stationary ones. By hitting the columns with their nude bodies, they moved them to the side, opening the space. In another performance, *Imponderabilia* from 1977, they produced a psychological barrier by standing nude in the entrance to an exhibition in Bologna, forcing the public to move between them. Vito Acconci 'loaded' spaces with his physical presence, confronting the audience with his physical aggression, or with his sex, as in the notorious *Seedbed* from 1972, where he would lie hidden under the floor and masturbate when visitors came in while talking to them. In the course of time, some of these performance artists started developing architectural concepts as well, like for example Vito Acconci and Hermann Nitsch. The latter made a series of drawings for his *Orgien Mysterien Theater*: a kind of subterranean bowels and intestines in which his slaughter parties should take place. In the late nineteen seventies, it was notably architect Bernard Tschumi who recognised the transgressive architectural consequences of performance art and explored them in a series of texts, installations and *Advertisements for Architecture*, culminating in a theory about architecture as an *event space*. The text of his most famous advertisement reads: "To really appreciate architecture, you may even need to commit a murder. Architecture is defined by the actions it witnesses as much as by the enclosure of its walls. Murder in the Street differs from Murder in the Cathedral in the same way as love in the street differs from the Street of Love. Radically."³¹ This shows that architects became more and more aware of the tension between their architectural proposals and the life that would take place within them, between the organising and disciplining power of architecture and the desire of people to organise their own activities and live their own life in freedom. Of course, Michel Foucault's reading of architecture as in his *Surveiller et Punir* played an important role in this process as well.³² At first, inspired by Jacques Derrida, architects tried to modestly produce a kind of free zones, in between spaces and heterotopias as margins within the system.³³

Body, Technology and Landscape

In recent years there are many attempts to reconcile the body with the vast scale of the landscape in a different way. The reading of the smooth and the striated space as in the work of Gilles Deleuze and Félix Guattari, and later on Deleuze's thoughts on the fold inspired architects to develop an architecture and an urbanism that try to get rid of forms of striation as much as possible and that are more based on an endless folding of the landscape to allow for a kind of nomadic existence that allows for spontaneous and changing groupings of people.³⁴ Within the framework of this article it is the work of Raoul Bunschoten that offers the most striking example. For his installation *Soul's Cycle* for the manifestation *Architecture and Imagination* that

took place in the Fort Asperen in 1989, Bunschoten made a series of large balls with wrinkled surfaces, that were installed in the circular corridor of the fortress, thus suggesting a kind of a planetary system. In the beautiful black and white photographs that were made by his wife, the photographer H. Binet, the planetary aspect of these balls was even more emphasised. The details she photographed looked like the first photographs that were taken from the moon during space flights - even the soft pale light seemed to be there. In his project *The Skin of the Earth* from 1990, Bunschoten took this one step further and investigated just fragments of this folded surface for architectural potential, implying that they would allow for dwelling themselves. In his recent work, Bunschoten takes that literally: studying the surface of the earth, by investigating cities and regions on a very large scale and mapping the processes at work there, using both aerial and satellite photographs and more situationist methods of investigation into the behaviour of small groups of people. The forces that regulate these processes are discovered by extensive fieldwork in the area and drawn onto the larger maps. The final drawings of these projects resemble satellite photographs again, but then with specific hints of processes changing the landscape.

Whereas Bunschoten seems to be mainly interested in the very large scale of the skin of the earth, many contemporary architects are of course more interested in creating just the folds to produce more specific architectural forms on a smaller scale. Examples are to be found in the work of such different architects as OMA, MVRDV, Ben van Berkel, NOX and Greg Lynn. The first two offices are mainly interested in creating a minimal, open architecture that allows for spontaneous groupings and organisations of people and are therefore in a similar way as Bernard Tschumi interested in performances and film. Rem Koolhaas for example sees his buildings as a kind of film studios, in which temporary sets can be built up for specific programmes, and MVRDV refer notably to Abramovic and Ulay. Greg Lynn however is still interested in the bodily analogies of architectural form in a similar way as Kiesler was: as a representation of the endless. The same is true for NOX, but they most consciously take the folding of the landscape as a means to overcome the threatening inertia that, according to Virilio, is caused by the developments in technology and the media. In that respect, their work comes closest to the intentions Kiesler had when he built the Endless House. In NOX's H2O Pavilion in Zeeland, an exhibition pavilion dedicated to water, the interior is an undulating landscape, animated with all kinds of interactive technology, in which the visitors are forced to climb up and down in order not so much to be disorientated, but to be activated and experience their bodies in relation to the surroundings. Also in the V2 Medialab in Rotterdam the floor is a kind of relief on which even special adjustable chairs are necessary to be able to sit stable and work - for a while. In these highly technological environments, in which the borders between the physical and the virtual, the floor and the ceiling, the construction and the machine, the interior and

the surroundings are constantly blurred, we are constantly reminded of it that our body is the only thing we can rely on. According to NOX's Lars Spuybroek we have to train its proprioception constantly to overcome the danger of a technology that seems to be instrumental but finally is only after it to comfort and pamper us, to put us asleep, to bring us into a state of polar inertia. The only thing we can dwell in and upon is our body.

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- 1 Friedrich Kiesler, *US, YOU, ME*, in: Frederick J. Kiesler, *Selected Writings*, Stuttgart 1996
- 2 Jacques Lacan, *The mirror stage as formative of the function of the I*, in: Jacques Lacan, *Δcrits, A Selection*, New York/London, 1977. See also: Antoine Mooij, *Taal en Verlangen, lacans theorie van de psychoanalyse*, Meppel, 1975.
- 3 Piotr Mraveinik, *Episodes in a Life devoted to Space*, in: *Sputnik, Catalogue of the exhibition with the same name, Fundaci3n Arte y Tecnologia*, Madrid, 1997. Of course, this book is too beautiful to be true, but for the sake of the argument that does not really matter here.
- 4 *Ibid.*
- 5 Tom Wolfe, *The Right Stuff*, New York, 1979.
- 6 See: Pierre Restany, Yves Klein, New York, 1982; Paul Wember, Yves Klein, Cologne, 1982; Yves Klein, *My position in the battle between line and colour*, in *ZERO 1*, (reprint), Cambridge (Mass.), 1973, 10-1.
- 7 Thomas McEvilley, Yves Klein, *messenger of the age of space*, *Artforum* 20, January 1982; Wember, see note 5, Restany, see note 5.
- 8 Pierre Restany, see note 5.
- 9 *Ibid.*
- 10 Yves Klein, *Un Homme dans l'espace*, in *Dimanche*, 27 november 1960, as quoted in: Sidra Stich, Yves Klein, Stuttgart, 1994.
- 11 Sidra Stich, see note 10)
- 12 See note 1.
- 13 *Idem.*
- 14 Friedrich Kiesler, *The "Endless House": A Man-Built Cosmos*, in: *Selected Writings*, zie noot 1.
- 15 *Idem.*
- 16 *Idem*
- 17 Michael Arena/Piotr Muraveinik, *Beregovoi's Report*, in: *Sputnik*, see note 2.
- 18 Peter Cook, *Archigram*, Basel, Boston, Berlin, 1991.
- 19 Peter Cook, *Lecture on Archigram at the New Babylon Symposium, TU Delft*, 26-01-2000.
- 20 Christoph Asendorf, *Super Constellation, Flugzeug und Raumevolution*, Vienna/New York, 1997.
- 21 Georg Sch6dlhammer, *The Bolted Gesture*, in: Sabine Breitwieser (ed.), *Pichler, Prototypes 1966-69*, Vienna, 1998.
- 22 Reyner Banham, *Triumph of Software*, in: Reyner Banham, *Design by Choice*, London, 1981.
- 23 Marshall McLuhan, *Understanding Media, the Extensions of Man*, New York, 1964.
- 24 See note 15.
- 25 *Ibid.*
- 26 Oswald Wiener, *Die Verbesserung von Mitteleuropa*, Vienna, 1969.
- 27 Paul Virilio, *L'Inertie Polaire*, Paris, 1990.
- 28 Christoph Asendorf, see note 14; Tom Wolfe, see note 4.
- 29 See note 20.
- 30 Andrea Branzi, *The Hot House*, London, 1984.
- 31 Bernard Tschumi, *Architecture and Disjunction*, Cambridge (Mass.), 1994.
- 32 Michel Foucault, *Surveiller et Punir*,
- 33 Jacques Derrida, *Maintenant, Point de Folie*,
- 34 See also: *Architectural Design Profile No. 102, Folding in Architecture*, London, 1993.