Visual Essay

From Exigent to Adaptive: The Humans of Air Architecture and Beyond

Elizabeth Gálvez

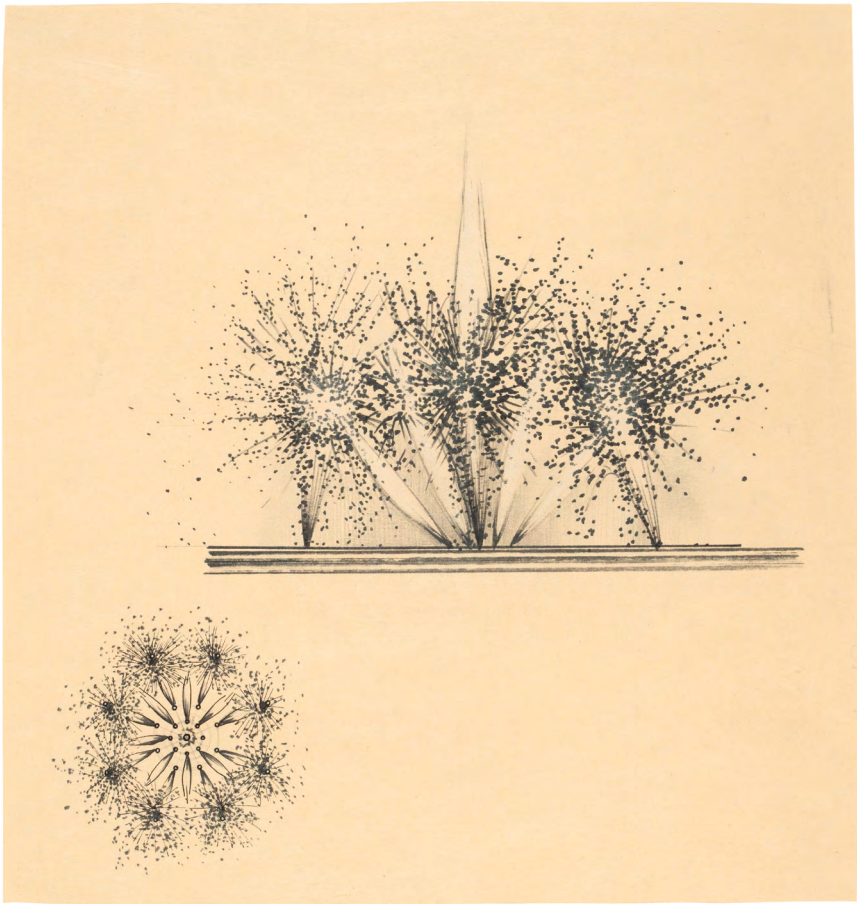
Architecture today has experienced a historical rupture that divorces the art of architecture from the climatisation of buildings. Rather, 'another culture' of builders – comprised of plumbers, subcontractors, and consulting engineers – constructs absolute comfort within buildings through the design of interior, man-made weathers.[1] The divorce between the disciplines of architectural design and systems engineering in conjunction with the scientisation of comfort-standards encourages a year-round and day-round comfort routine to the contemporary human. Yet, coordinated central-air, mechanical and utility systems date back no more than seventy years. Human adaptation has been replaced via strict reliance on mechanical systems – temperature, lighting, and purification machinery support an exigent-human. The scientisation, acceptance, and deployment of comfort-standards have displaced the critical relationship between environment and human.

In his proposal for an Air Architecture, French artist Yves Klein proposes the opposite: an architecture devoid of the responsibility to temper human environs.[2] Klein envisions an architecture of air where humans adapt to their environment. He positions architecture as the 'air conditioning of vast geographic residential spaces'. While mechanical equipment is an important piece of the proposal, human needs become 'former obstacles'.[3] Prior requests for functionality are supplanted by a change in human sensitivity. Rather, mechanical equipment is used towards the architectural. Klein's imagination supplants the conditioning, architecturally insignificant, puffs or air emitting from wall vents for 'walls of air' – wind gusts forming a wondrous immaterial enclosure.[4] In opposition to the spirit of science fiction, where technology and machinery aid humans in coping with their environment, for Klein, it is the human who yields to her milieu.[5] Mechanical machinery enables an architecture to come, while Air Architecture imagines a future adaptive-human.

In his essay ‘Cell Block, Egospheres, Self-container: The Apartment as a Co-isolated Existence’, Peter Sloterdijk describes the modern dwelling unit as a ‘cellular world-bubble’, providing the complete and preferred climate for performing our ‘self-care cycle’.[6] The dwelling unit operates as an autonomous entity, isolated from the exterior. At its most basic form, the unit permits its dweller, or rather host, to accomplish her circadian tasks. The human is placed at the centre of her individual world-bubble, which provides ‘sleeping and cooking facilities, a bathroom and toilet, a table to eat at, storage, air-conditioning or heating, a mailbox, a telephone, and a media cable or antenna’.[7] The qualities for the home are read, simply-put, as a separation from the exterior furnished with a series of mechanical equipment. While Sloterdijk describes these provisions as ‘the minimal, basic and elementary architectural and sanitary conditions necessary for autonomy’, interestingly, these fulfil not only basic necessities, but uninterrupted comfort via man-made weather, connectivity, and entertainment.[8]

With increased accessibility to interior comfort from the 1950s on, the ordinary dweller values the quality of the air-conditioning and technological services within, equally if not over that of the architectural container itself. [9] For example, popular design magazines of the time, such as John Entenza’s *Arts & Architecture* magazine promoting mid-century housing, contain a plethora of advertisements for interior equipment. As an antithesis to the individual architectural unit, a series of radical architectural provocations envision an environmentally conscious world that critically repositions the relationship between human and architecture. Archizoom’s No-Stop City explores an infinitely conditioned interior while Superstudio’s Supersurface projects a continuous and homogenous surface across the various regions of the earth. Both proposals connect nomadic humans to an infrastructural grid that provides for basic needs of comfort and connectivity. Both worlds project alternative models for living while questioning various possibilities for climactic and cultural adaptations, yet neither is willing to question human reliance on standardised, generic mechanical systems – ventilation for interior air, water supply and disposal, and electrical grids.

Yves Klein, *Jets d’eau et de feu* (Water and Fire Jets), ca. 1959. Ink on paper. 33 x 31 cm. © The Estate of Yves Klein c/o ADAGP Paris / Claude Parent.



The logic of such proposals can be read as an allegory for the generic quality of the individually comfort-controlled dwelling unit already embedded in cultural value systems worldwide taken to its extreme – all that the exigent-human needs is a grid to plug into. The egospheric human continues to experience total and frictionless comfort via interior climatisation technologies like running water, plumbing, air-conditioning, and internet routers.[10] For the exigent-human, her daily confrontation with infrastructural technologies represents her most intimate relationship with architecture. In ever more drastic climactic and resource realities, the exigent-human's lost adaptive capabilities place her at a vulnerable disadvantage for survival without mechanical support.

While Archizoom and Superstudio focus on the infinite mechanical, infrastructural grid inhabited by the nomadic dweller, Constant's New Babylon focuses more precisely on the aspect of play. In *Homo Ludens*, Johan Huizinga argues that play and culture are inextricably intertwined – that play is involved in the creation of culture.[11] Play lies outside of practical, ordinary life; it has nothing to do with utility, duty or truth.[12] In the immaterial arts – music, poetry – play is bound up with the idea of mastery. Yet, the material or plastic arts pose an interesting challenge as their boundedness to matter, limitations of form, and functional responsibilities prevent an absolutely free play.[13] The architect is faced with a 'serious and responsible task: any idea of play is out of place', as her building must function. For New Babylonians, the self-directed creation of situations and atmospheres through mechanical systems control is encouraged. In Air Architecture, Klein imagines playgrounds of energies, enticing the human dweller to engage with new climactic situations through qualities of joy, wonder and play. In Air Architecture it is not considerations of utility and efficiency alone that inspire great works, invention, or human advancement, but rather it is the element of play. With Air Architecture Klein takes on the functional culture of mechanical systems through the lens of architecture.

Yves Klein, 'Empty' room dedicated to the 'Immaterial Pictorial Sensibility', Museum Haus Lange, Krefeld, January 1961. 440 x 160 x 290 cm. © The Estate of Yves Klein c/o ADAGP, Paris. Photo: © Kunstmuseen Krefeld, Volker Döhne.

The adaptive-humans of Air Architecture exist in a sensorial, playful world of mechanical apparatus. Yet, while the mechanical equipment of current architectural worlds is subservient to human comfort and inhabitation, Klein uses mechanical equipment for the creation of architecture itself. Through the use of underground mechanical apparatus, Klein explores energy as material for defining seemingly immaterial enclosure. Klein explores with walls of air and columns of fire in not only drawn, but also built formats.[14] Yet, the essence of lightness, air and the immaterial is conveyed only via a dramatic concealment of carefully orchestrated mechanics. A rejection of architecture as pure shelter, Air Architecture looks towards a progressive architectural future. The function of the mechanical apparatus is subverted to create an immaterial architecture for the adaptive-human, rather than to assist the exigent-human in coping with his environment.

As human demands become former obstacles, Klein utilises mechanical devices in service of architecture rather than the functional demands of humanity.[15] Klein uses mechanical air ventilation to create walls of air, architectural space defining elements as opposed to ventilation explicitly for servicing occupant comfort demands. Requests for functionality are supplanted by a change in human sensitivity. Klein's affinities lie in servicing architectural demands over human demands. He writes,

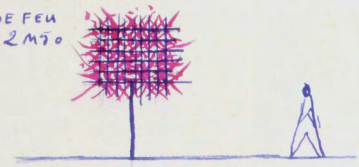
> The true goal of immaterial architecture: air conditioning of vast geographic residential spaces… Rather than being accomplished by technological miracles, this temperature control will become reality through a change of human sensitivity into a function of the cosmos.[16]

In the above passage, Klein describes human adaptation to climate and surroundings through advancement in human sensitivity. Although it is not clear if this would be a psychological or biological evolution, what is clear is that his architectural imagination challenges humans to welcome new forms of architecture over easy comfort. Thriving inhabitation of both excessively hot and cold climates have been recorded well before and after the advent of a climate-controlled world by native populations such as the Anasazi and the Inuit, in extremely hot and cold climates respectively. Before the popularisation of interior weather, native populations employed adaptations, or experience a 'change of human sensitivity', much like native plants

Yves Klein, *Le Feu* (The Fire) (D 91), 1959, with the collaboration of Claude Parent. Executed by Sargologo. Pencil, ink and watercolour on paper. 15 x 36 cm.

TABLEAU DE FEU
S : 1M² H 2M50

1957.



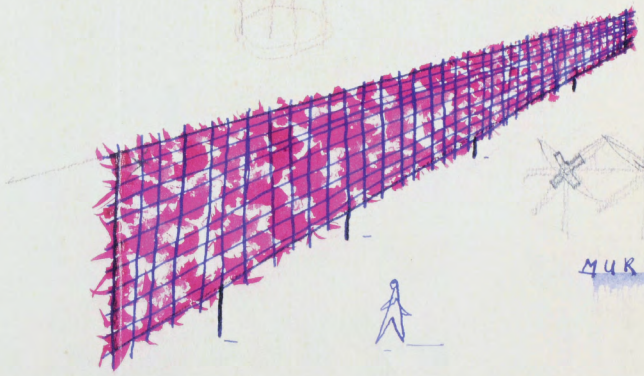
LE FEU ①

TABLEAU ET MUR DE FEU :

TABLEAU : 1M² MATERIEL-INSTALLn 750 $

CONSTion PAR HEURE ; 18 M³ GAZ.

HONORAIRES : PAR M² -- 600 $



MUR DE FEU

COLONNE DE FEU.
HAUTEUR : 2 Mètres
SOL : SABLE. GALET
ENTOURÉ DE DOUVES.

LE FEU ②

COLONNES DE FEU (GAZ DE VILLE)

POUR UNE COLONNE :

MATERIEL INSTALLATION : 800 $

HONORAIRES : ---- 600 $

GAZ DE VILLE : PAR HEURE 300 M³

COLONNES DE FEU
SUR PIECE D'EAU

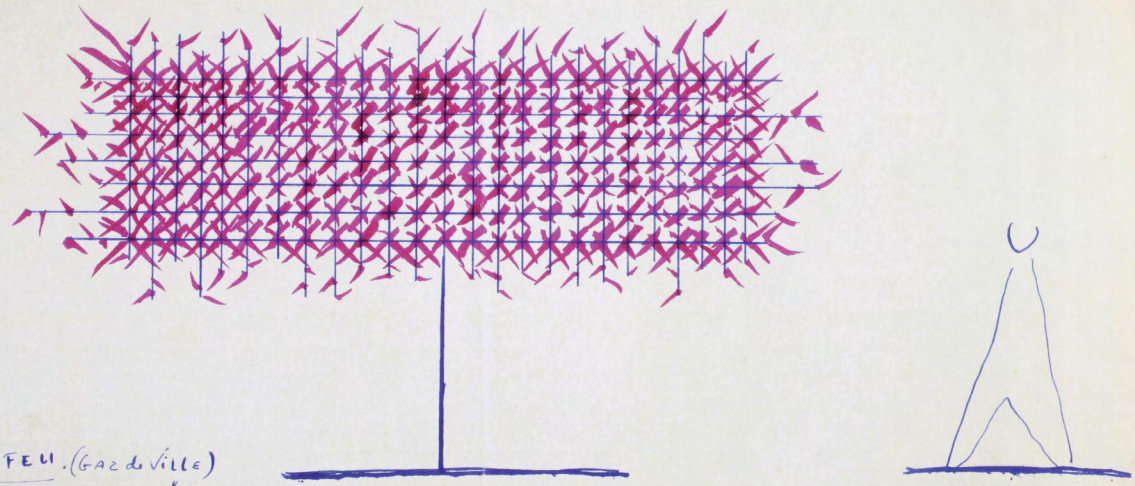
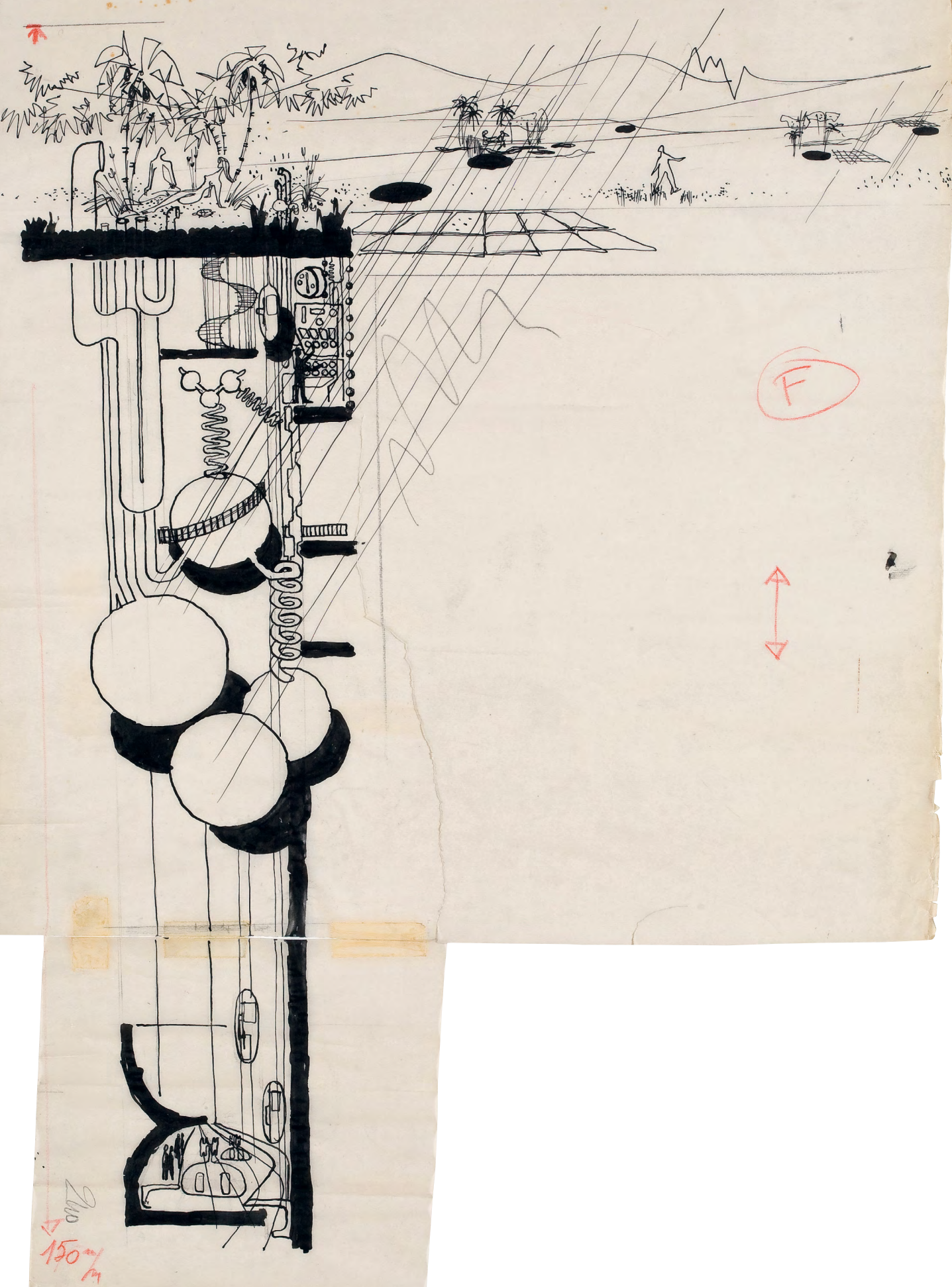


TABLEAU DE FEU. (Gaz de Ville)
2 m² MATERIEL 1.500 $
HONORAIRES ... 1.200 $

and animals do in order to survive their environment – very similar to the transformation that Klein describes. Desensitised humans today, in contrast, continue to flourish only by manipulation of regional climates through significant technological and engineering feats. Ironically, the advent and scientisation of indoor-climate has narrowed human understanding of climactic comfort.[17] With the proliferation of mechanical heating, cooling, and hygienic equipment, humans have experienced a loss of both acclimatisation capabilities and the willingness to accustom themselves to changing, varying or difficult climates.

Air Architecture employs a playful imagination to envision an architecture that rids itself of the age-old responsibility to temper human environs. Instead, Klein proposes that humans adapt to their environment by enticing them to play – reducing practical demands from mechanical machineries opens their availability to architectural thinking. Klein creates new playful situations for inhabitants. Contrary to current engineering values, as an architect, Klein focuses on the provision of new spatial experiences as opposed to restraint, practicality, or frugality. Such a world suggests the development of more playful acts – walls of fire may warm space while enticing us to approve of sweat, while evaporation fountains provide semi-private renewable, flexible architectures. In Air Architecture it is joy that makes such situations desirable to human inhabitation, while expanding acceptance to new forms of mechanical equipment and new understandings of comfort control. Walls, enclosures, interiority and exteriority become not only illegible, but also unnecessary. The borders of intimacy, the egosphere, and enclosure break down and displace the human from the centre of his delicate world-bubble into fluidity with an unbounded-world as Air Architecture gives way to a world that seduces the exigent-human into an adaptive-being. Can we imagine joyful situations that encourage less resource consumption by focusing on joy, play or conditioning rather than fear?

Yves Klein, *Sous-sol d'une cité climatisée*, (Underground Area of a Climate controlled City), (D 87), 1959. Ink and pencil on tracing paper. 73 x 48 cm. © The Estate of Yves Klein c/o ADAGP Paris / Claude Parent.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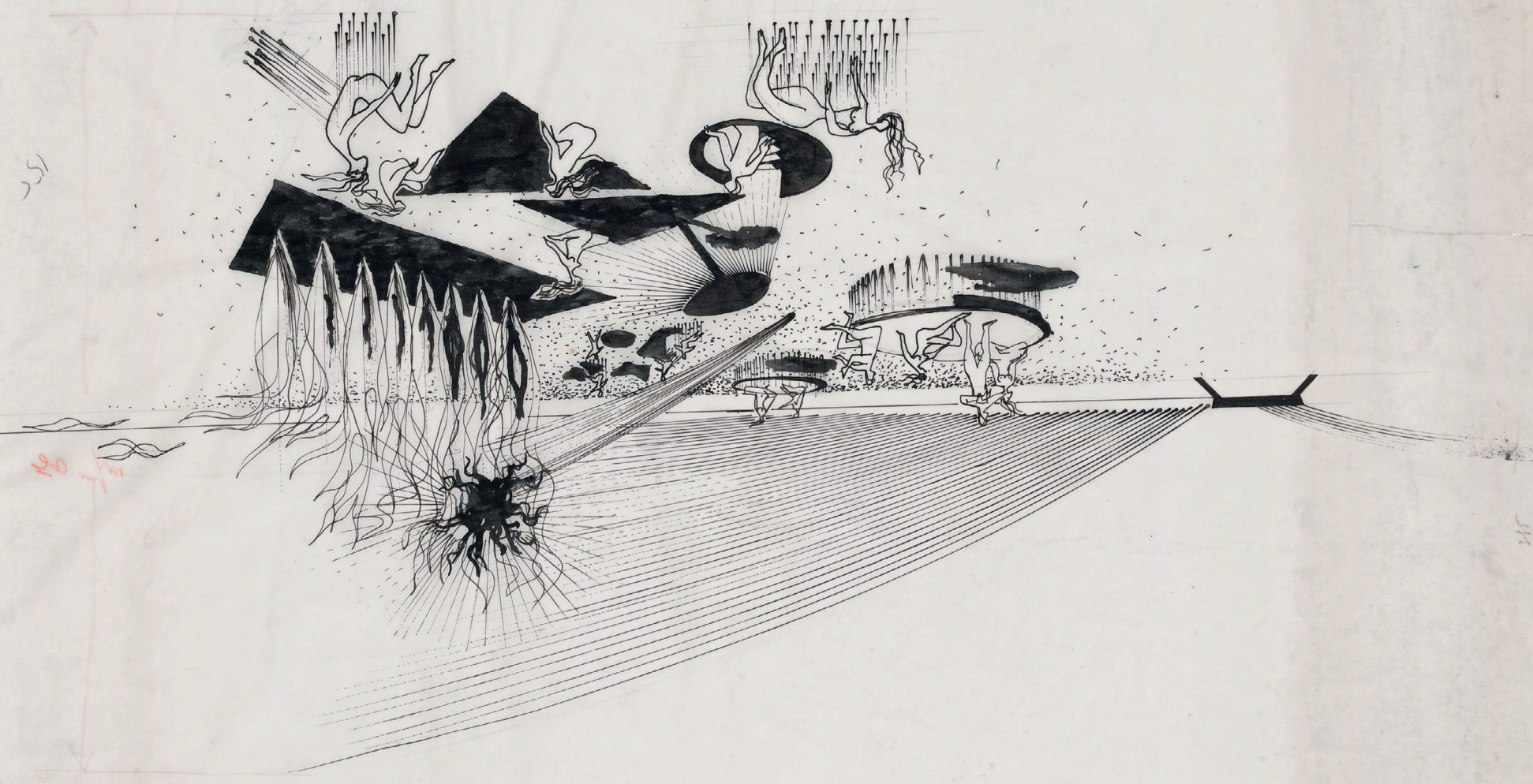
Milieu: 'man the scholar' versus 'living man'

In his essay 'The Living and its Milieu', philosopher Georges Canguilhem explores the relationship between humans and their environment.[18] Canguilhem points out three possibilities. The first is a median or in-between condition. The second exists as a fluid of suspension or unison. And lastly, the third relational possibility is defined as a life environment relative to a centre.

> The milieu that is proper to man is the world of his perception, that is to say the field of his practical experience in which his actions, oriented and regulated by values that are immanent to his tendencies, carve out certain objects, situate them relative to each other and all of them in relation to himself. This occurs in such a way that the environment he is supposed to be reacting to finds itself originally centred in and by him.[19]

In the passage above, Canguilhem concludes that the third relationship, that of the human as the centre of his or her universe remains our privileged view. Under this worldview, the milieu on which the organism depends is structured and organised by the organism itself and his or her demands on the surrounding environment.[20] Fluid symbiosis between human and environment is understandable only to the intellectual-human, or a character Canguilhem defines as 'man the scholar'. 'Man the scholar' constructs a universe of phenomena and laws held as absolute, yet 'living man' denotes a higher degree of reality to his own perception and demands.

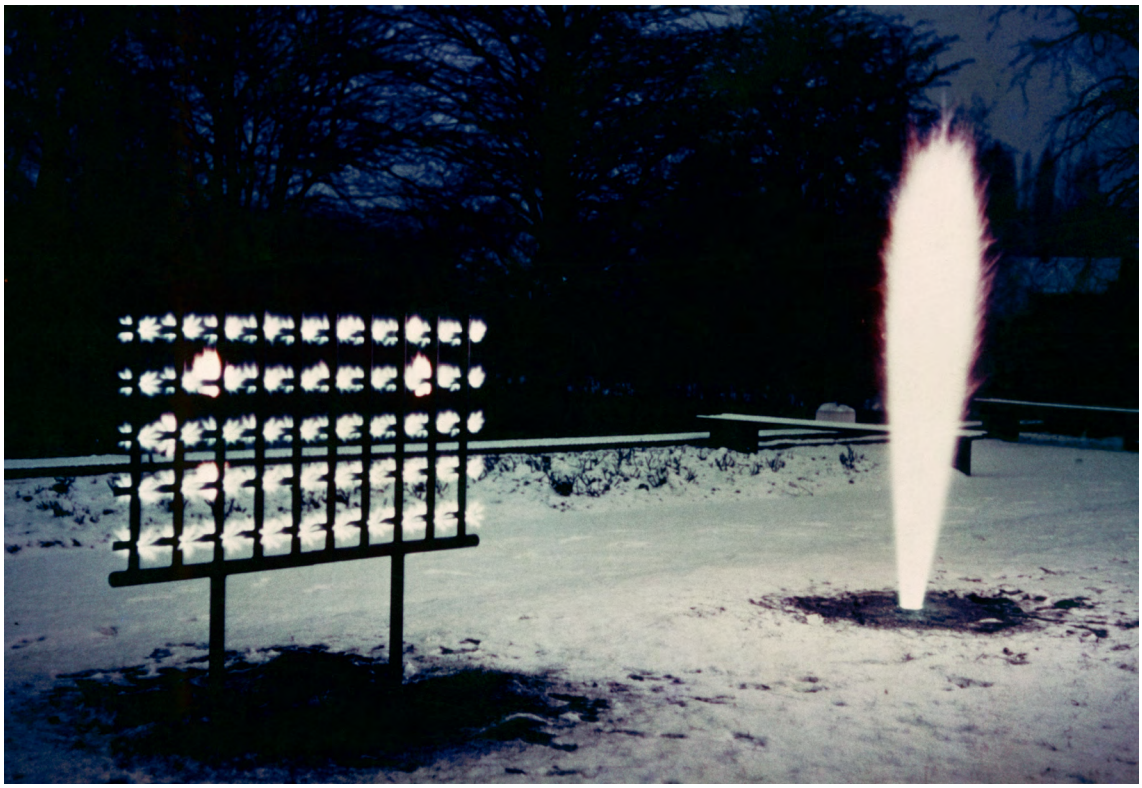
Yves Klein, *Cité climatisée, toit d'air, murs de feu, lit d'air*, (Climate Controlled City, Air Roof, Fire Walls, Air Bed), (D 93), 1961, with the collaboration of Claude Parent. Ink and pencil on tracing paper 50 x 68 cm© The Estate of Yves Klein c/o ADAGP Paris / Claude Parent.



The intellectual-human understands climate-change. Furthermore, the intellectual-human values the criticisms explored by Archizoom, Superstudio, and Klein as well as their vision for an adaptive-human. On the other hand, the living-human understands comfort and the reality of her existence. And, at present, she understands hunger, uncleanliness, coldness and hotness. She does not enjoy the tools necessary to regain her adaptive sensibilities. The living-human understands the convenience of her home, her environmental bubble. While the intellectual-human may understand himself and his decisions as part of an in-between or fluid relationship to his larger environmental system, the sentient living-human will, at large, continue to opt for the conveniences known to him through his perception as the centre of his world.

The architectural container speaks to the human understanding as centres of a subservient environment. Such technological advances can be most easily organised by the exigent-human and his demands immediately satiated by the surrounding environment. Air Architecture's vision appeals to the intellectual-human and his potential to become an adaptive-human. Can architects employ the architectural imagination, as Klein has, to develop the human inhabitant into an adaptive, yet, unquestionably self-centred human? Via play and giving rather than taking.

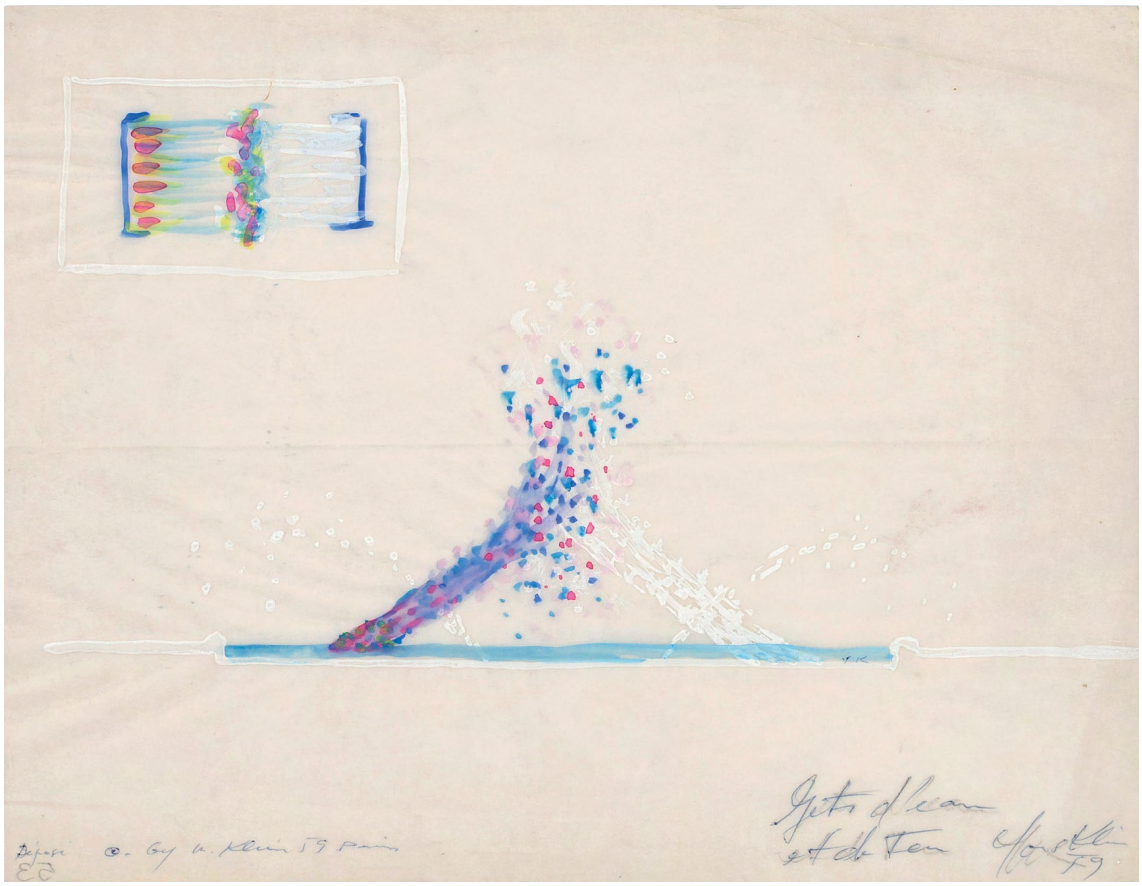
Yves Klein, *'Mur de Feu' et 'Colonne de feu' lors de l'exposition 'Yves Klein Monochrome und Feuer'* ('Wall of Fire' and 'Column of Fire' during the exhibition 'Yves Klein Monochrome und Feuer'), Museum Haus Lange, Krefeld, January 1961. 'Wall of Fire' composed of fifty Bunsen burners and gas, 'Column of Fire' composed of a burner and gas.



Evolution through play

The transformation between the exigent-human and the adaptive-human becomes even more critical to our survival as established climate patterns become more drastic world-wide. Sloterdijk and Canguilhem help us understand the self-centred human, while Klein and Constant provide the playful imagination for enticing him into a new way of life – an adaptive-human. Based on the existing relationship between human and environment, the advent of a new society as foreseen by Klein will require taking the self-centred human into account. To transform shelter, Klein employs cultural, psychological, and biological engagement in order to find a playful space in which to intervene by giving rather than taking. If architecture enables human activity and behaviour, an understanding of current rules for social, political, and anthropological engagement is essential in the creation of a new epistemic condition. As Klein's vision for the climactic imaginary wishes to reclaim human sensitivity to their surrounding environment, Architecture can intervene through playful space to develop its inhabitant into an adaptive, yet, unquestionably self-centred human. As architects, we can influence space, not through utilitarian, purely technological or conservation proposals, which have fallen into the repertoire of the consulting engineer, but through a rethinking of formal, sensory, and spatial provocations. Air Architecture's minimal, immaterial architecture can only exist in a world where humans have acclimatised to their environment. Architecture must no-longer fulfil its practical role. Curiously, today, the challenge for realising Air Architecture is not technical, but rather cultural or ideological. The agency of architecture can only take on this challenge as a spatial, formal, and sensory feat and not a purely technological or systems based one. In a world where reduction and scaremongering tactics do not accomplish the necessary change to halt or reverse climate change we must think towards a more enriched human existence, for a thriving, strengthened human race. Klein uses architecture – the giving of a joyful experience, the imagining of a new worlds, to encourage human adaptation through an employment of playful mechanics.

Yves Klein, *Jets d'eau et de feu,* (Water and Fire Jets), 1959. Watercolor, gouache and pen on tracing paper. 23.7 x 30.7 cm.


Jets d'eau
et de feu

Our current architectural forms are recognised as containers for technological equipment that comforts, conditions, and leverages the current environment in service of its human host. Subverting the typical role for technology to serve humankind, Air Architecture utilises mechanical equipment in the service of the built environment itself. Leaving behind the human's practical needs, the project challenges architecture's foundation as the purveyor of shelter for a vulnerable human. Air Architecture imagines a world in which the human has advanced his or her capabilities, psychologically, culturally, or biologically, yet our current condition of architecture – a subservient force – weakens humanity's future survival due to reduced physical and psychological resistance to varying climatic situations. Architecture must function, and fulfil our current human needs, but can it at the same time stimulate the human capacity to adaptation? If world climate is changing, is architecture's role not only to temper our current environment, but also to temper the human to combat the difficulties of a future world to come?

Le Rêve du Feu (The Dream of Fire), ca. 1960. Black and white photograph. 24 x 18 cm. Photo: © Harry Shunk and Janos Kender J.Paul Getty Trust. The Getty Research Institute, Los Angeles. (2014.R.20) © The Estate of Yves Klein c/o ADAGP, Paris.

Notes

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1. See Ellen Lupton's discussion of Reyner Banham's use of the term 'another culture' in the introduction with J. Abbott Miller to their *The Kitchen, the Bathroom, and the Aesthetics of Waste: A Process of Elimination* (New York: Princeton Architectural Press, 1992), 8.
2. Air Architecture is a collection of works of art and texts describing an architecture project undertaken by Yves Klein and Claude Parent during the late 1950s and early '60s. There have been subsequent exhibitions and books titled *Air Architecture*, but I refer to more generally to artists' project and ideas.
3. Yves Klein and Werner Ruhnau, 'Project of an Air Architecture', in *Yves Klein: Air Architecture* (Ostfildern: Hatje Cantz Publishers, 2004), 77.
4. Yves Klein, 'Immaterial Dwellings, in *Yves Klein: Air Architecture* (Ostfildern: Hatje Cantz Publishers, 2004), 28.
5. Klein, 'Project of an Air Architecture,' 77.
6. Peter Sloterdijk, 'Cell Block, Egospheres, Self-container', *Log: Observations and the Contemporary City,* no.10 (Summer/ Fall 2007): 92.
7. Ibid.
8. Ibid.
9. Archizoom Associates, 'Residential Parkings: No-Stop City Climatic Universal System', in *Exit Utopia*, ed. Martin Van Schaik (Munich: Prestel Pub, 2005), 181.
10. See Peter Sloterdijk's use of the term 'egosphere' in 'Cell Block, Egospheres, Self-container', 92.
11. Johan Huizinga, 'Play-Forms in Art', in *Homo Ludens: A Study of the Play-Element in Culture* (London: Routledge and Kegan Paul, 1949), 167.
12. Ibid., 158.
13. Ibid., 166.
14. Klein, 'Project of an Air Architecture', 77–84.
15. Ibid., 77.
16. Ibid.
17. Gail Cooper, 'From Luxury to Necessity', in *Air-Conditioning America: Engineers and the Controlled Environment, 1900–1960* (Baltimore: Johns Hopkins University Press, 1998) 140–64.
18. For the purpose of clarity, Canguilhem's gendered terminology, standard at the time of his writing, has been retained here. '*Le Vivant et Son Milieu*' first appeared as a chapter in *La connaissance de la vie,* first published in French in 1952.
19. Georges Canguilhem, 'The Living and Its Milieu' in *Grey Room 03*, trans. John Savage (Cambridge: MIT Press, 2001), 26.
20. Ibid.

Biography

Elizabeth Gálvez is a Mexican-American architectural designer and educator. She served as the 2018–19 William Muschenheim Fellow at the University of Michigan's Taubman College. She received her Master of Architecture with a concentration in History, Theory and Criticism from the MIT School of Architecture and Planning, where she was awarded the Department of Architecture Graduate Fellowship. After completion of her graduate coursework, she studied in Austria as the recipient of the Seebacher Prize for the Fine Arts under sponsorship of the American Austrian Foundation. Since 2016, Elizabeth has taught at the Boston Architectural College and has served as a critic on reviews at MIT, the BAC, Taubman College, RISD, and the Harvard GSD.