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The Geomorphology of Cyborgian Geography

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The Geomorphology of Cyborgian Geography

NEIL SPILLER

If you have a smart phone, and let's face it you probably do, you will be familiar with small “alerts” interrupting your surfing or emailing. When it does this, the virtual machine of the phone, which usually pretends to be a word processor, a laptop, a camera, a gaming engine or a photo album and a million things between, suddenly becomes a virtual geography teacher opening your mind up to a machine-augmented perception of a changing morphology of space and its fluctuating strata. This is cyborgian geography. This is our environmental context as much as any physical geography or transport infrastructure. There is a whole spectrum of morphologies based on the electromagnetic spectrum and a whole raft of cyborgian geomorphological archeologists armed with many machines—some vintage, some state of the art—who can reveal their depths of spaces to us, as well as their fluctuating nature.

Architects have witnessed the growing fecundity of these types of spaces and have noted their destabilizing influence on the

monopoly of traditional planned and designed space. However, few have speculated on what architecture might be or mean when partially immersed in these new digitized terrains. I am one of these architects—who has sensed a need to develop new ideas, tactics and strategies to save the architectural profession from navel gazing itself into extinction. Why have architects lost their way? Architects are obsessed with form, they like the way their buildings look at the expense of everything else. While this is not a crime in itself, it can leave them myopic to the great boon of the virtual—interconnectivity, expediency and enabling of delight. Also the global construction industry is fixed into series of simple economic relationships predicated on a very limited palette of materials, some of which have been around for millennia. The fast, evolving dynamics of software, hardware and the flying freehold and leaseholds of the virtual world have yet to have any meaningful impact on the ubiquitous economics of the built environment.

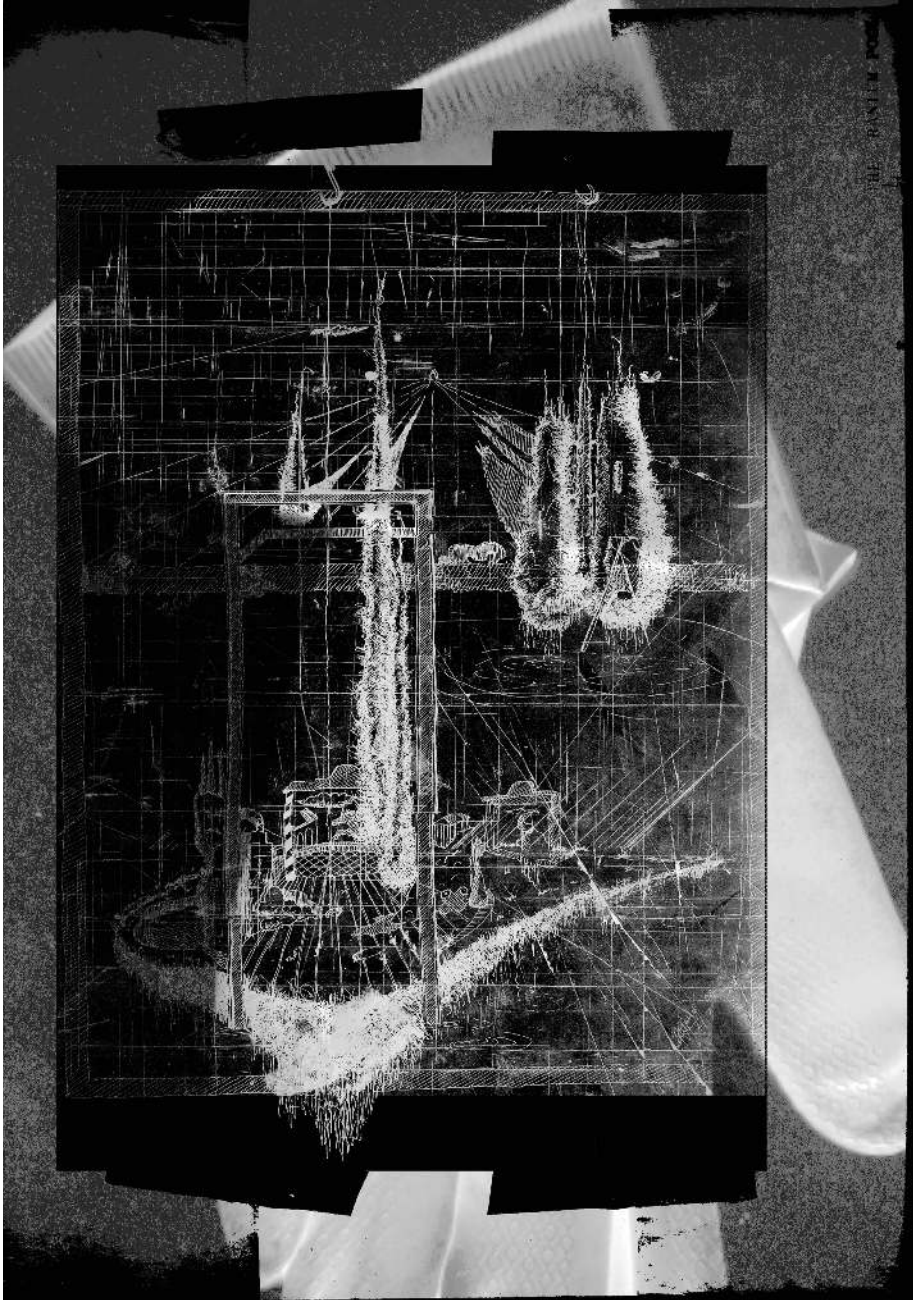
VACILLATING OBJECTS

In 1997 I could feel this tsunami gaining strength in the great deep oceans of architectural education, my own work and the work of others. This led me to write an essay entitled "Vacillating Objects."

"The city is populated by limp and soft bags of mostly water, crowded between and within towers of metal, stone and glass. Some towers tall and thin, some very stubby indeed. These soggy, leaky bodies spend much of their day mumbling to each other through an invisible metaskin. This skin, a skin of communication, is forever becoming more hyper sensitive and more able to trace itself [...] Man-made constructions, the products of hard engineering, are starting to vacillate. The object is losing its pathetic impartiality. Objects have for too long floated in a sea of objectivity. Our technologies have developed a series of interlinked spatial fields, each with differing qualities with blurred boundaries. The objects that inhabit those fields are becoming schizophrenic. One of the tasks of the cyber- or biotech will be to design ecologies of what I shall call 'object fields,' not just to define the definite object that operates in a uniform spatial field. An object will have many selves, many simultaneous forms. Technology is forcing the object to become a subject,

partial and anamorphic. The anamorphic object changes form when viewed from certain viewpoints, in different fields. The new objects will have formal qualities that are determined by the virtual or physical terrain in which they are viewed or manipulated [...] The viscosity of a spatial domain can fluctuate [...] The new spatial fields consist of a series of variable component fields: gravity, viscosity, spatial jump-cutting being but three simple ones. These optional spatial parameters will become ever more dexterously able to be manipulated, as our technologies become advanced and less confined to the virtual. One must also not forget the morphological potential of biotechnological objects and nanotechnological objects, and their ability to unconventionally chemically compute.

The traditional non-virtually augmented object has had an inability to respond to most spatial fields and changing an object by force, whether heat or hammer, has normally resulted in the object ceasing to function. The new objects will suffer from none of this crippling inertia or pathetic entropy. They will work in mysterious ways. They will change their topologies not just across spatial boundaries but often within the same spatial field" (Spiller 1998, 57–58).



Analysis of Beauty (Part One)

THE SEVEN CONTINUA OF POST-DIGITAL ARCHITECTURE

Contemporary architects have no choice but to couch their work within the epistemologies and connectivity of virtuality's hyper-links, geo-tags, nested cartography and its hybrid ecologies of cyber fauna and flora. This is a world mostly invisible to us, a world on top of our anthropocentric reality.

This is a “sur-real” architectural topology which slips beyond the merely invisible world of the electromagnetic spectrum to the yet-to-be-seen world of dark matter.

The experience of contemporary architectural designers is one of positioning their work in relation to seven continua. These are:



Little Soft Machinery



Site Plan **Communicating Vessels**, Fordwich, Kent, UK

1. *Space* – Is there to be defined. A continuum of space that stretches from “treacle” space standing in a field—no computer, no mobile phone, no connectivity whatsoever— to full bodily immersion in cyberspace. Along the way between these two extremes are all manner of mixed and augmented spaces.

2. *Technology* – Is means, not meaning. Like space, technology ranges from simple prosthetics (the stone axe) via the Victorian cog and cam, to the valve, capacitor, logic gate, the integrated circuit, the central processing unit, the quantum computer, the stem cell, the monocoque and a million states and applications between and beyond.

3. *Narrative, Semiotics and Performance* – Is myth. An architect, designer, explorer

can chose whether their work operates along a continuum that ranges from minimal engagement in quotation or mnemonic nuance in relation to the history of culture or the contemporary world, or embraces the multiplicity of the complex and emergent universes of discourse that we inhabit and engage with daily. A design might conjure new conjunctions of semiotics as a way of re-reading them. It also might integrate itself with human and cultural memory and it might be reflexive and performative (in real time or retrospectively).

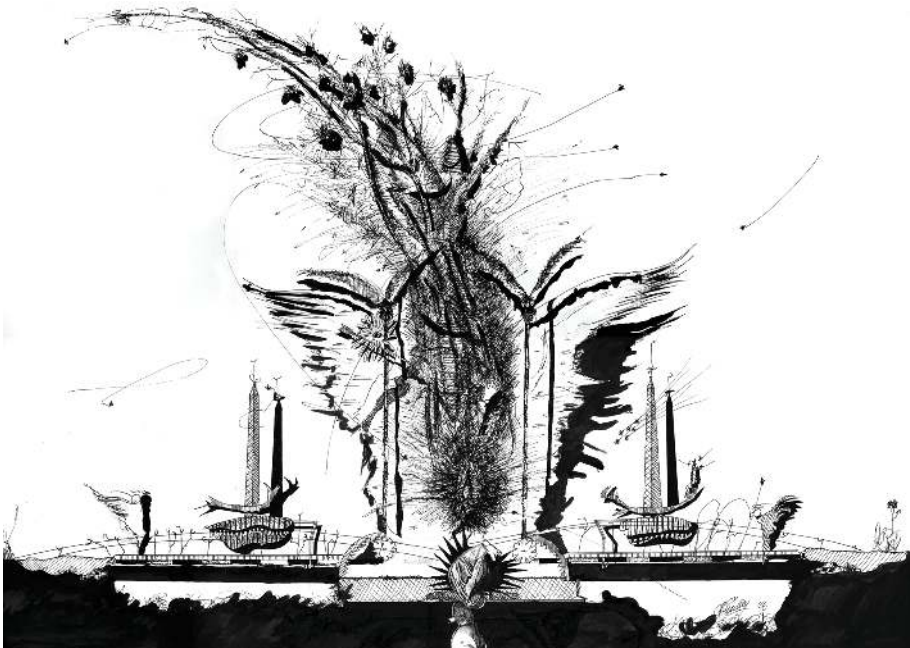
4. *Cyborgian Geography* – An architect, designer, explorer now can posit work, which operates in all manner of mixed and augmented terrains that are subject to all manner of geomorphic and cybermorphic factors and drivers.

5. *Scopic Regimes* – Architecture can exist at all scales, it all depends on the resolution of the scope that one chooses to use. Continents, oceans, cities, streets, rooms, carpets, micro-landscapes and medico-landscapes are all part of this continuum of weight and measure.

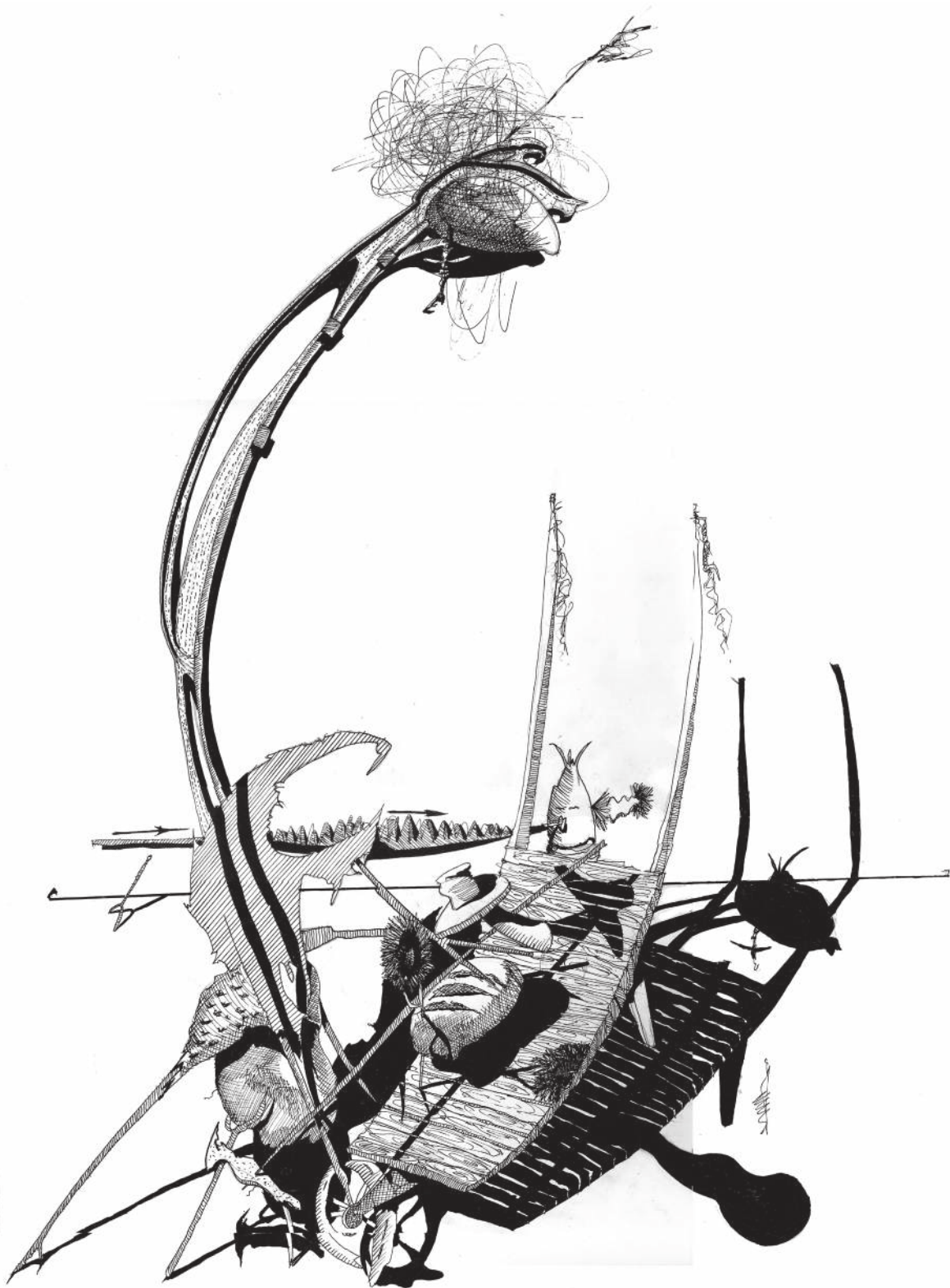
6. *Sensitivity* – An architect, designer, explorer might decide to make objects, spaces or buildings whose parts are sensitive and can pick up environmental variations or receive information. These sensors therefore can make objects and buildings that are influenced by events elsewhere or indeed are influential elsewhere.

7. *Time* – The central ingredient to this heady elixir. All the above six continua can be time dependent. Therefore, our new protagonists,

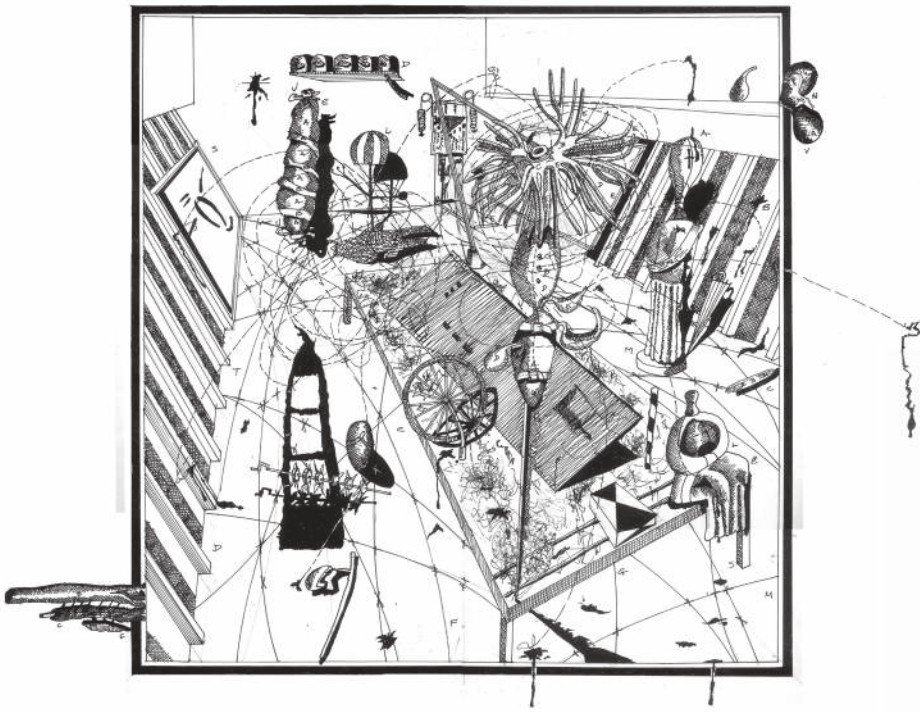
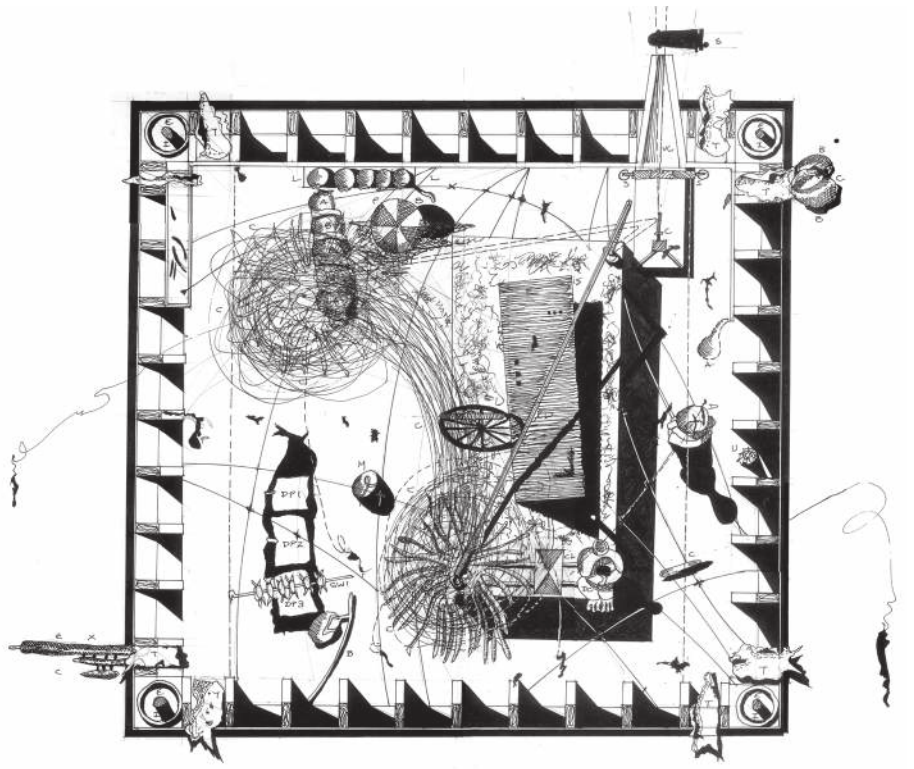
architects, designers, explorers can “mix” the movement of their spaces, buildings and objects up and down the other six continua. So a design might oscillate the spaces within itself with varying elements of vitality over time. A design might use different technologies at different times in its existence. A design might perform complex mnemonic tableaux at certain points in its life cycle. A design might demand of its occupants the use of a different lens with which to see other than anthropocentric phenomena or spaces. A design might coerce the occupant to be aware of environmental conditions in other locations that change. A design might change the sensitivity of objects over time, dulling them sometimes, making them hypersensitive other times.



Angel Gate



Perspective Wheel Barrow



Inside Doctor Dee's Trunks. Interior Plan and Perspective

COMMUNICATING VESSELS

During the last ten years, I have been developing a large and dense theoretical project that addresses some of the surreal possibilities of the new technologies in response to ideas of individuality, mnemonics, poetics, machinery and the history of art and architecture. It is called "Communicating Vessels."

The "Communicating Vessels" project is a mechanorgyistic "Pataphysical Chunking Engine" constructed out of desire, chance, poetry and Surrealist history. It is conceived as an alternative to contemporary digital architecture, yet it is digitally contemporary. It rejoices in fundamental natural imperatives and living technologies. Its teetering dynamics oscillate around a mythical island, half there, half not. It rides its metaphorical bicycle through the pantheon of Art History and tosses itself happily into the dark crevices that are between and across poetic architectural desire.

The objects in the project occupy a vectorial space that is always shifting and unstable. Relationships change and symbolisms vacillate.

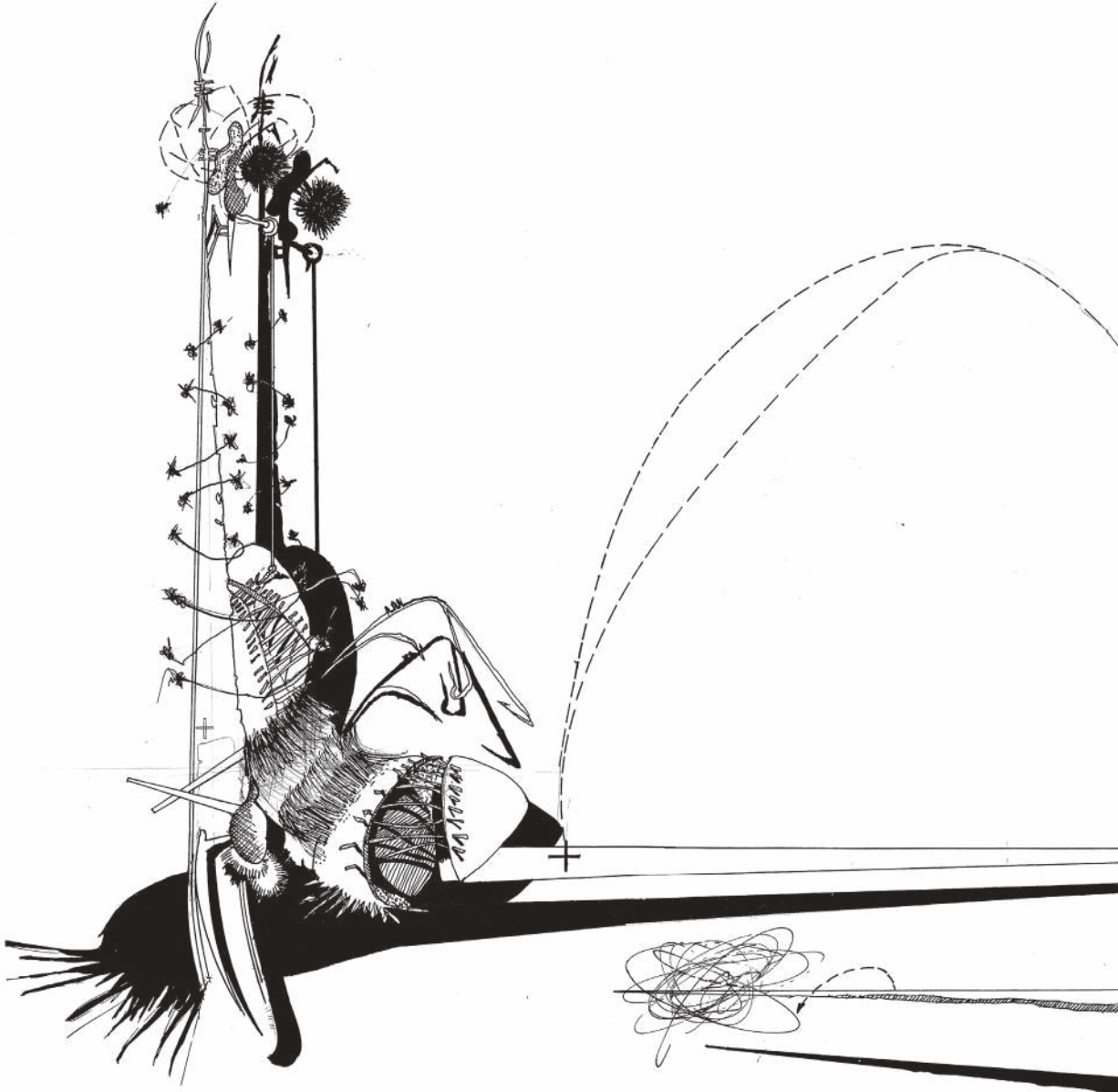
This is the English Country Garden of a Heavy Metal Mad Hatter with dark Baroque sympathies. The epistemological

distinction of plants, animals and machines is eroded. The conscious and the subconscious worlds are dallied with to create a psychosexual landscape that flirts with good and bad taste yet makes important observations and precedents for Architecture and its systematic future.

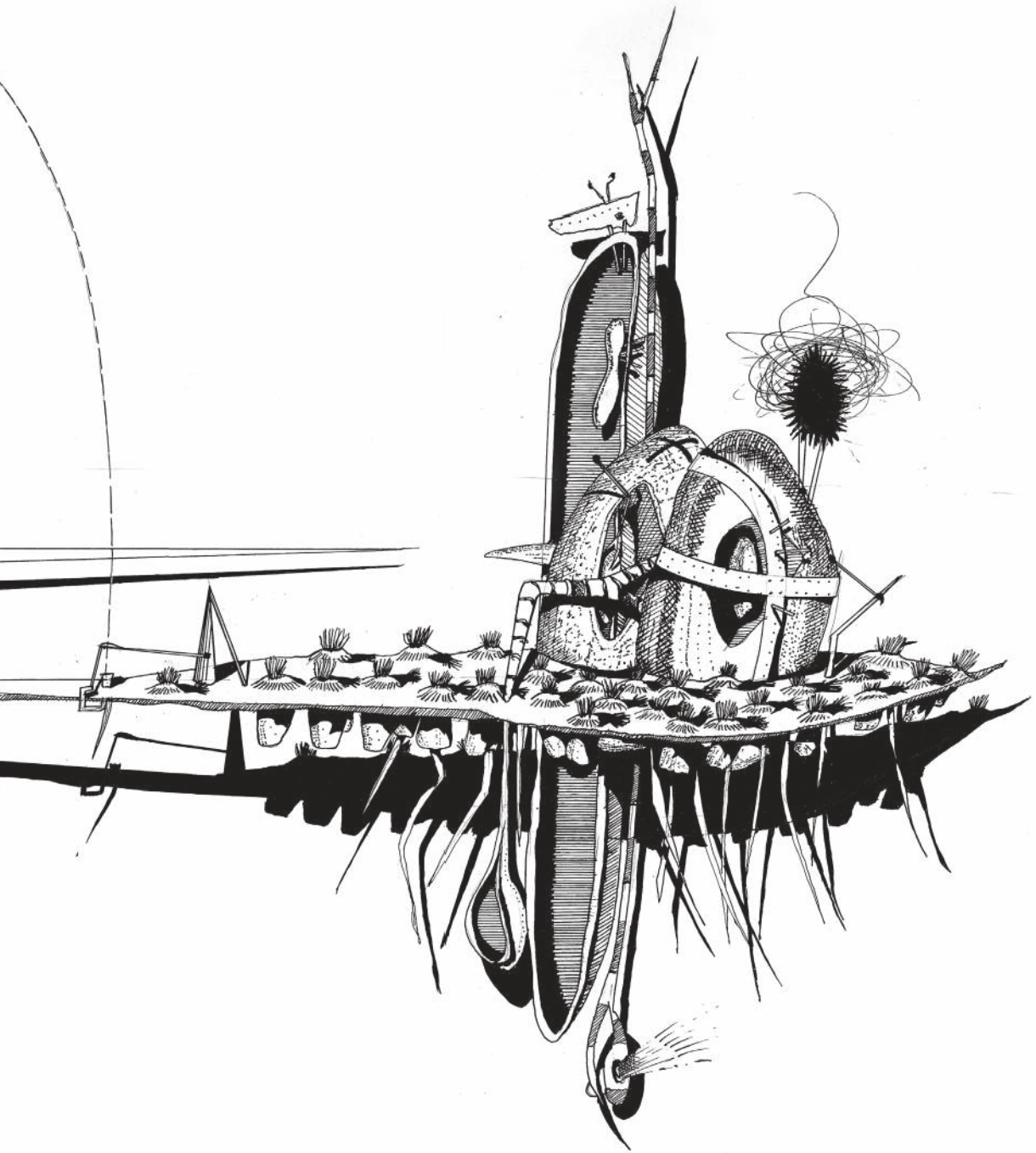
Elements that are explored in the light of these notions include:

The Entrance
The Gate
The Tree
The Vista
The Fountain
The Sculpture
The Bower
The Gazebo
The Artist's Studio
The Site plan
The Seasons
The Temple of Repose
The Chapel
The Love Seat
The Laboratory
The Dovecote
The Shed

"Communicating Vessels" operates in spatial fields that are numerous, complex and susceptible to chance and change. These include ideas about how to re-boot torn



Drawing Board Duo



natural ecologies with artificial catalytic ones; how we might harness the growth imperative of plants and be able to grow some of our products in a clean and sustainable way; how we might create twenty-first-century memorials as well as other mnemonic spaces; how we might tell stories to bring the power of our architecture alive; how we might create locative, performing architecture and how we might embroider space at micro and macro scales. Elements can take as initial points of departure ideas from the history of Art, or the history of ideas, or the arcane and hermetic history of architecture. But all pieces shown here are conscious of their role in the continuity of radical architectural thought. We make marks in the future and carve out territories for further exploration.

Points of view cascade, epistemologies are anamorphically distorted to reveal architectures that prove that surrealism invigorated by advanced technology is a useful paradigm for architects to research augmented architectures in the early twenty-first century. The work goes further than this and speculates on the convergence of all our technologies, virtual and biotechnologic.

PROTOCELLS – THE UNIVERSAL SOLVENT

“...‘Here hold out your hand.’
He had the test tube poised over her hand. ‘Palm up, stupid.’

‘Is it safe?’

‘It’s better than safe.’
Jazir opened the tube and poured out a large globule.

‘It’s horrible.’

‘A slight burning sensation.
It soon passes.’

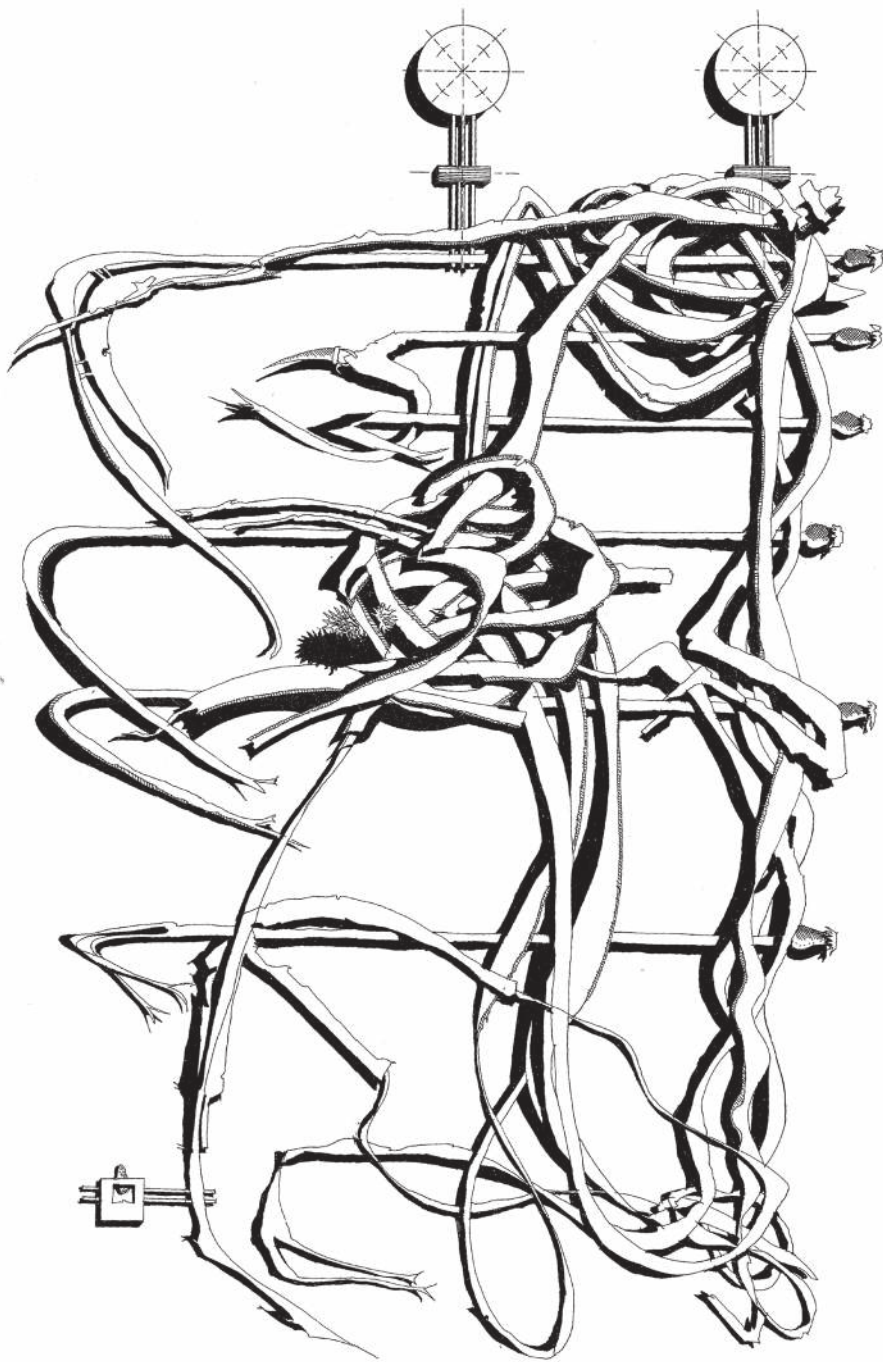
‘No I mean it’s greasy.
And... oh...’

‘Yes?’

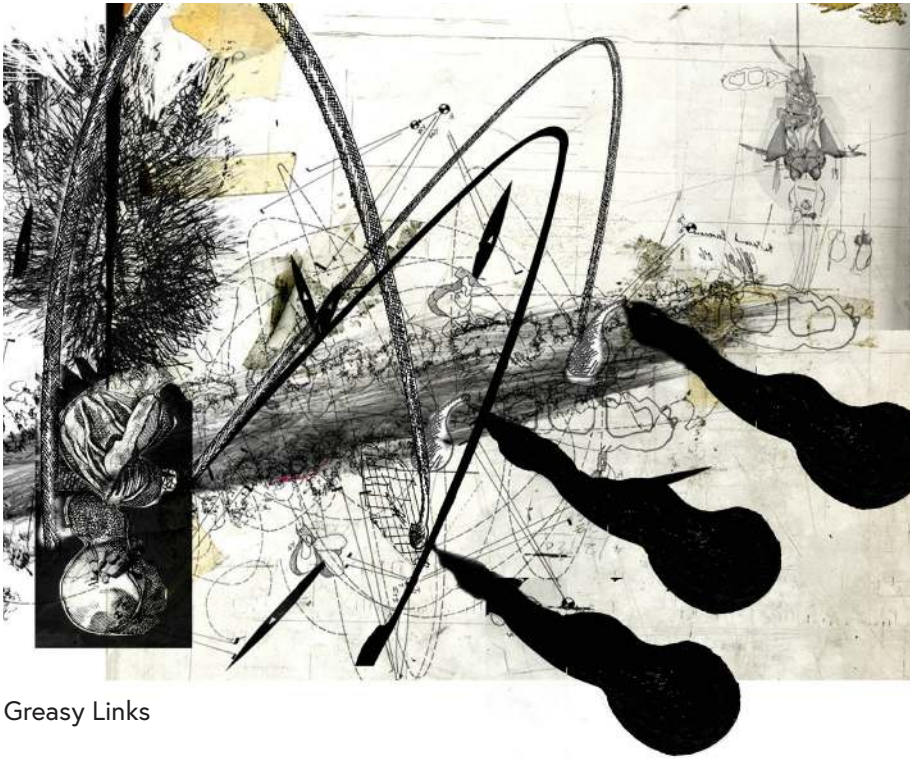
‘It tickles! ...’” (Noon 1997, 142).

WETWARE, ARCHITECTURE AND BESPOKE CONSTRUCTIONS

For centuries, the simple rule for making highly finished architecture or products has been to make it somewhere other than from its point of use—the medieval masons’ yards, the baroque sculptors’ studio, the nineteenth and twentieth century factory being a few examples. As the distance between use and manufacture becomes greater and greater, and as skills become replaced by mechanization, building skills have become undervalued and consequently mostly lost. Coupled with notions such as “fast track” construction techniques (where the imperative is to limit “wet” trades as much as possible and



Space-Time Gate



Greasy Links

build with “dry” prefabricated elements that “click” together), the skill set of site operatives has been emaciated to almost nothing. This denudation is now at the point where no one really expects anyone on a building site to have any skills apart from the most simple. Prefabrication brings with it an obsession with “tolerance.” (This means how far a product’s actual dimension differs from the idealized dimension due to inaccuracies in the factory process, the inherent qualities of a material or the inexactitudes of site setting out and measurement, and how we can “cover” these variations.) Much technological innovation has been aimed at reducing these margins of error in the fabrication and construction process to

achieve cheap, easily quantifiable outcomes that are quick and easily erected. These ideas also predicate a view of the world and the sites of architecture as mostly ocular-centric, anthropocentric, ubiquitous, non site specific—lacking in difference, and fighting against nature.

I wish to put forward the opposite paradigm. This paradigm fosters a view of the world that is bottom-up, wet, microscopic, chemically computational, maximalist and ecological. It also changes the economics and procurement dynamics that we are so used to within the realms of traditional construction. Further, it is a “recant” technology—it takes less

than it gives back in relation to carbon, energy and contextual damage. It is not inert, or finely honed, and is also fecund, highly sensitive and safe.

LIVING TECHNOLOGY

“...‘Allow me.’ Jazir picked up a syringe, which he filled with the blurb juice off Daisy's palm.

‘Now, watch...’ He dragged Daisy over to his bedroom door. ‘You wanted me to open the door, right? OK, try the door.’

‘It's locked. You locked it...’

‘Good.’

Jazir shoved the syringe into the keyhole. He pressed the plunger. ‘Give it ten seconds...’

‘And?’

‘Try it, Go on.’

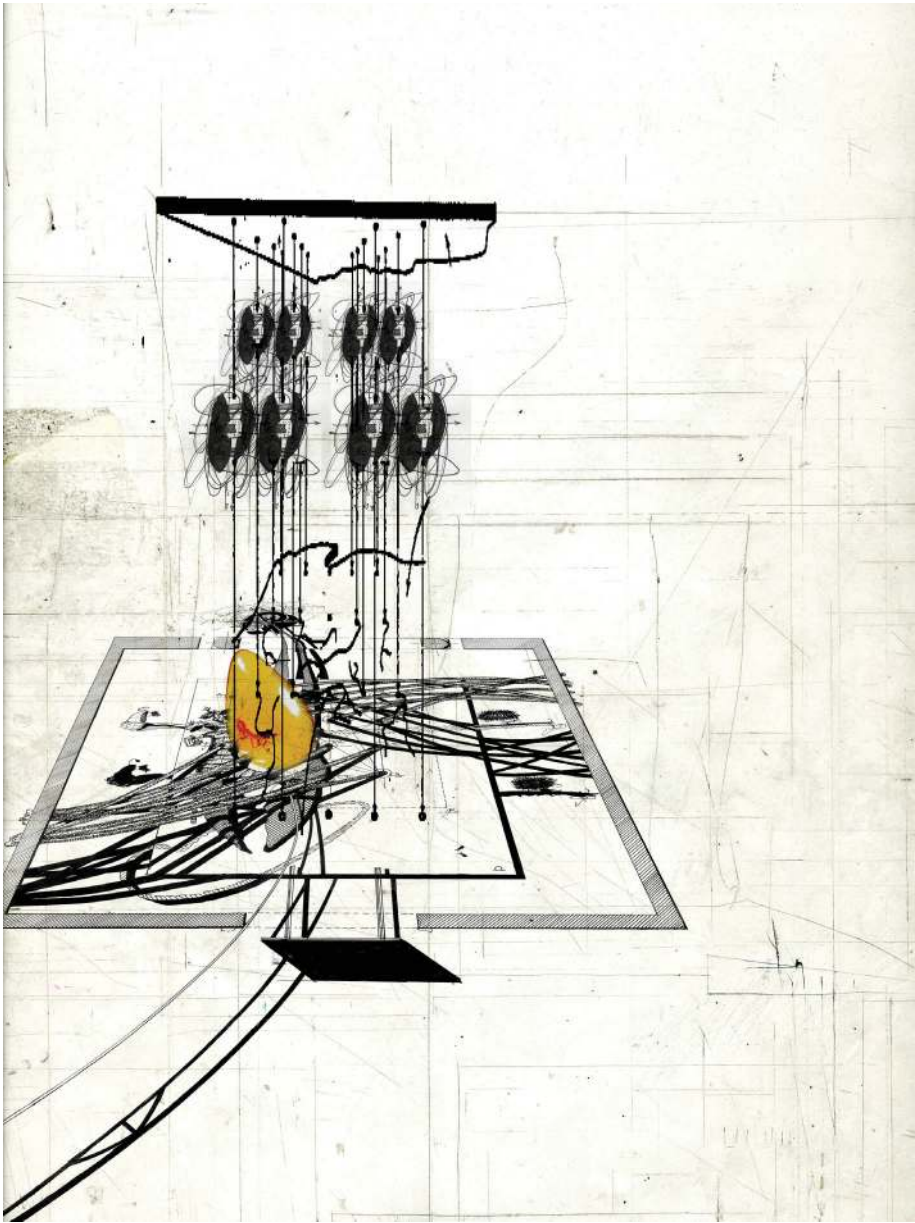
Daisy looked at Jazir like he'd gone mad, a clear possibility. Then she turned the doorknob. It swung open, nice and easy...” (Noon 1997, 143)

A new group of materials is emerging that exist in a realm between the living and inert. While displaying some of the properties of living systems such as growth, movement, sensitivity and complex behavior they are not truly “alive.” One example of a living technology is a protocell, a chemically programmable agent based on the chemistry of oil and water. It is able to move

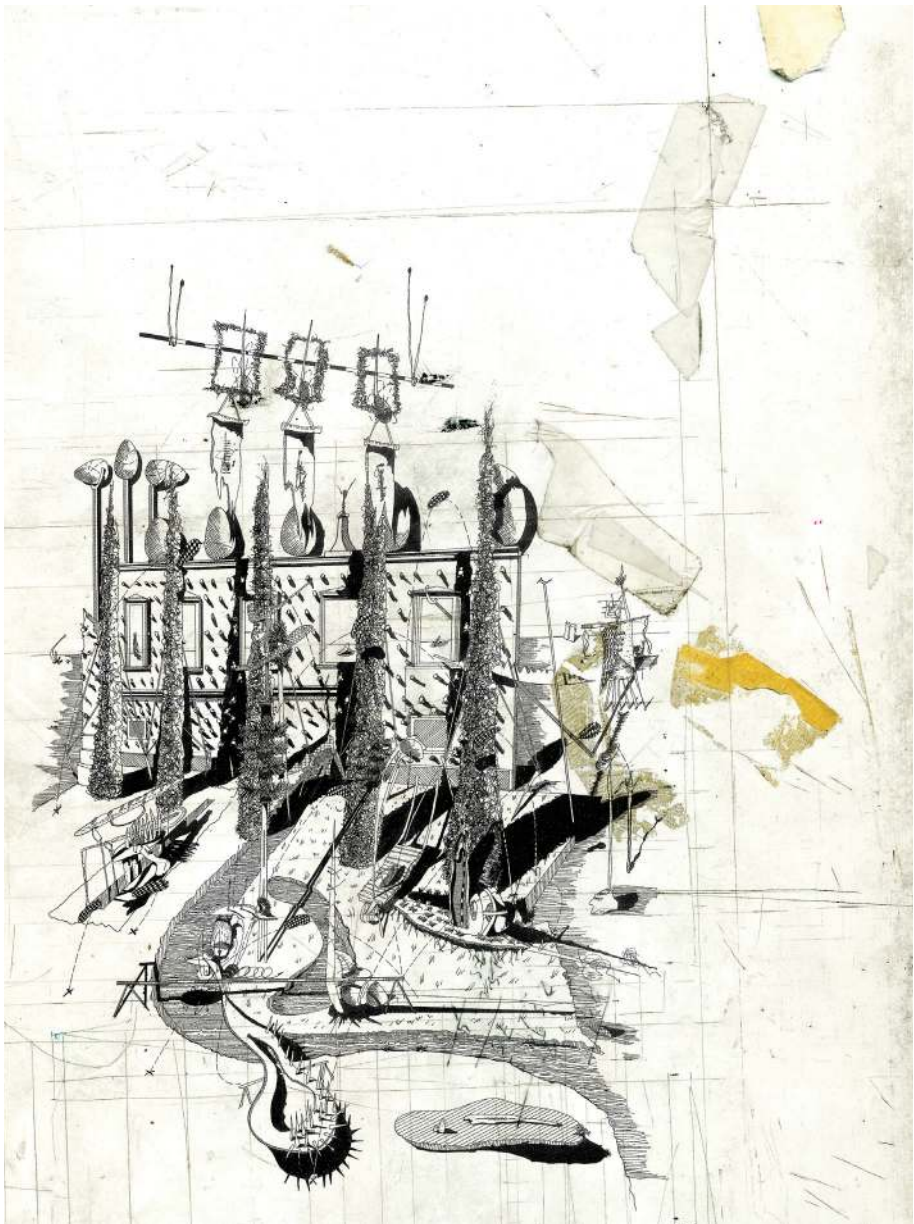
around its environment, sense it, modify it and construct materials. Protocells are symbiotic with, rather than competing against, existing systems and materials, and in particular, share a common physical language with natural systems called a “metabolism.”

This is the dynamic process through which one material becomes another by the absorption and production of energy. Through an engagement with the language of metabolism, the twilight zone of existence of protocells may initially seem inexplicable. On further examination at the molecular scale, these extraordinary new materials may be understood very simply as being driven by the laws of physics and chemistry. Ultimately, protocells and other forms of living technology can be manipulated through the canons of scientific and technological experiment though, through their similarity to living systems, they promise to become agents of transmutation that are more familiar to the practice of alchemy. We are already *au fait* with applying substances to restore the holistic functioning of the human body and living technology offers the potential to deploy this technique in order to restore the harmony in irretrievably damaged architectural micro-environments.

To ease the intellectual transition from the provision of hard



Genetic Gazebo



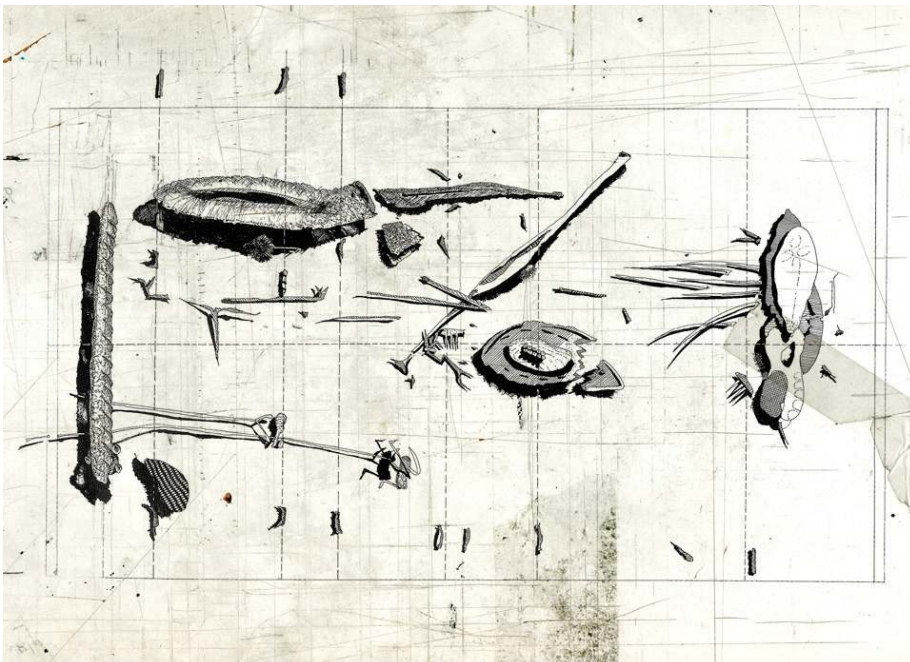
Partial Landscape

engineered products to the chemical mixing of solutions one must investigate the paradigms of alchemy. Alchemy is not just similar to architecture but it has become one and the same with our current and future technologies. The alchemic analogy is useful in pointing the way to possible spatial chemistries that exist as living technology that just might free us from architectural deadlock. Living technologies are alchemic in their ability to reconfigure matter. The more science progresses, the more we become architecturally, alchemically adept.

Alchemy almost disappeared nearly three centuries ago, but there has always been an interest in its literature and its art. More recently, the

surrealists used alchemic and other occult literature to inspire some of their most memorable works. We are reminded of Duchamp's *The Bride Stripped Bare by Her Bachelors, Even (The Large Glass)*, and of Ernst's *Of This Man Shall Know Nothing* and *The Robing of the Bride*, among others. Living Technologies and protocells are also surrealist technologies of softness, growth, swarm and scaffold.

The initial step in the alchemic work is to discover the transmutable *prima materia*. In the context of living technology the *prima materia* in protocells is the self curvature and bottom-up formation of the spherical lipid membrane. Contemporary developments in the scientific understanding of matter suggest that essentially



Archeological Slam

all matter is space at various interacting curvatures. It is here, at the outset of the alchemic opus, that it can be seen that alchemy and architecture share a fundamental basis, the manipulation of space, in all its varied forms, philosophical and physical. Once the *prima materia* is established, a process of considerable complexity is undertaken.

The *prima materia* of the protocell transforms the non-living into the living, the simple into the complex, the predictable into the mysterious. Various stages and transformations occur, producing a taxonomy of forms that are created by the system for the architectural observer to read, explore and use. Their origins remain mysterious and are most comprehensively read through mythological lenses, as the not live becomes a living agent with apparent anthropomorphic desires and ambitions capable of behaving at a population scale. As a colony, the protocells interact and gather information about their surroundings displaying these as complex behaviors, signaling and transforming their surroundings so that their environment eventually becomes changed. They have an ability to arrange themselves into a community of bubbles, and then chemically negotiate these boundaries to make movement, garner “food/

fuel,” precipitate skins and be sensitive to light. All these phenomena will have a huge impact on the construction site of the near future. Construction processes could be instigated and sculpted by sharp pulses of light, for example.

“All I need is a name for it.
The stuff that opens anything!
The universal lubricant. The oil of
the world! Puts Vaseline and KY
in their place, don't you think?
Jaz Vaz!...” (Noon 1997, 143)

“NYMPHOMATION: SEXY KNOWLEDGE” (1997, 146)

What is interesting to me as a surrealist is the connection that can be made between the exchange of information in wet unconventional computers and the sexual act or desire and the mixing of information. There is much precedent for such notions. Marcel Duchamp was very adept at these sorts of analogies and epistemologies. His *Large Glass* is conceptually activated by gas, water and electromagnetic forces to create tableaux of desire, autoerotics and barely maintained equilibrium. His addition to Maria Martins' (his lover) version of his *Boîte-en-valise, Paysage Fautif* (Wayward or Faulty Landscape) was a spurt of seminal fluid on Astralon backed with black satin.

Jeff Noon is much more explicit about this connection. “I’ve found of these masses”—he calls them “vaz” but they could equally be protocells—“floating around. Sometimes they fight each other, like galleons. They steal supplies off each other. They eat each other. They fuck each other. They give birth. The cycle goes on” (1997, 147).

The “Communicating Vessels” project also speculates on the protocell and other forms of synthetic biological structures. Here, they are called the “grease” and are created by a bio-technological factory called “Little Soft machinery.” Little Soft Machinery isn’t very smart, just smart enough to desire. This desire provokes his biomechanical glands to produce the grease, the vaz or the holy gasoline (this substance is called many things, it changes lives, it mixes chance). It is a synthetic biological elixir, smart but highly explosive. The grease lubricates the project and is always present when human or machine information desire is present—which is most of the time. The grease eases things, it is lustfully combustible, it is sought after and it is autonomous until it is caught. It is used by many of the structures that inhabit and interact in the site, which is a garden. This is indeed a Duchampian “faulty landscape” teeming with desire, the

exchange of information and the probabilities of chance.

Let’s undo the locks that have constrained architecture for centuries and rejoice in hearing the chains drop to the ground. Our new architecture is an architecture of bespoke, wet and invisible solutions.

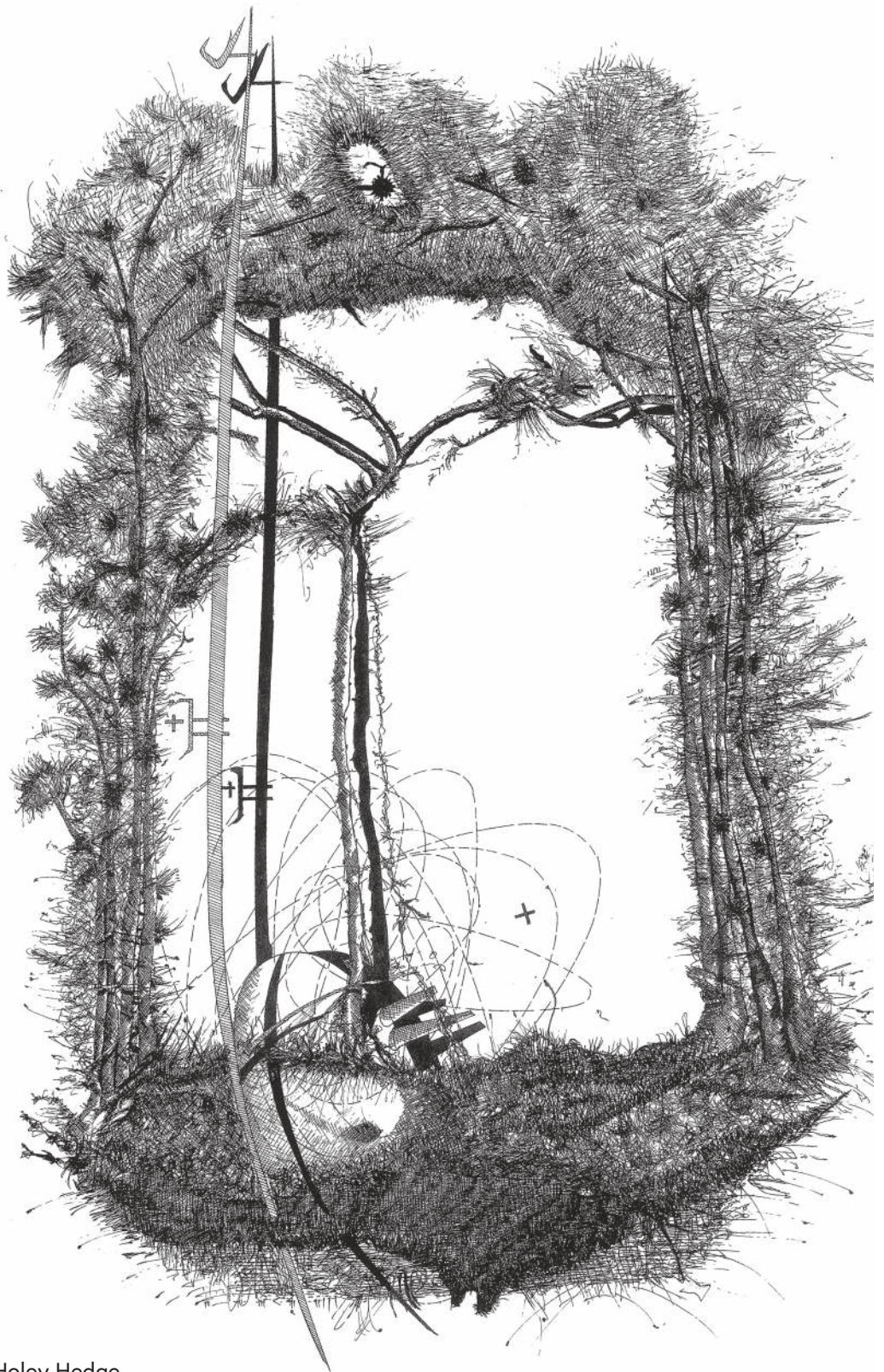
Marvel and enjoy this work, take it for what it is: sublime vignettes of a world that is already here. A world so many architects are blind to.

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All images by Neil Spiller.



Holey Hedge