MASS
A TREATISE ON CONSTRUCTION
Experiments in Material Culture
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The aim of this thesis is cohesively question how we build. As a constructed thought it pauses at the moment before the raw matter of the Earth is transformed into sociological object and attempts to extrapolate a broader cultural context for the making of architecture. The argument is generated using both projection and observation as a means of exploring the potentialities within this transformative process.

It is a tale of three cities – New City, Non City and Now City. New City is an imagined paradigm, an alternate metropolis built on a culture of material pragmatism, a space where ‘weight’ is the defining scale. Now City is a study of urbanity in its current state, specifically its position as a piece of constructed ground. Finally, Non City theorizes a new typology for civic space that bridges the Now with the New.

Limerick is the geographical starting point: a test bed for the spatialization of these thoughts.
Over time, new discoveries and technological advances have altered our perception of the planet. Both the microscope and the tower have allowed us to recognise patterns, both of and within matter, that are invisible at ground level. Circumnavigation proved, conclusively, that the world is round. And as we began to soar above ground and sea, aviation and space exploration allowed us to see Earth as a whole object, delicate, suspended in space and quickly became a profound historical moment for mankind. Every epoch of human history has been altered by a series of insurmountable discoveries and shaped by the powerful contrivances they beget. Yet, as we have delved deeper into the workings of the physical, we have, somewhat ironically, become disembodied from it. Nature and culture are divided. The cleaving of the sciences, the reduction of ‘natural phenomena’ into individual academic recitations has derailed our hope of achieving a non-egocentric understanding of our surroundings. The naming of the matter, which we deem outside of our bodies and our erected habitats, inhibits our ability to view our planet as a complex system, when the Earth, as a collective of passive mass and biological alignments, knows no such distinction. Therefore, nature, as a constructed concept, applicable only to human understanding, must be disassembled. Again, it is a matter of scale. How would our perception of the ‘blue marble’ alter if we understood its scale in terms of weight, deriving human and societal understanding from its constancy?

We have become mechanically minded in an enzymatic world, believing that nature is simply inanimate matter obeying inarguable mechanical laws. Construction has transformed into the art of assembling standardised parts in a standardised process. It is possible to better the practice of construction, resolutely abandoning the conception of the ‘occupied machine’ as a feasible architectural model. Yet, this transformation must originate from a much more fundamental understanding of material culture. A more critical knowledge of the physical, chemical and even monetary properties of matter has the facility to alter the cyclical nature of buildings and space. An edifice could contain the potential energy for its own disassembly, encompassing the power to passively transform itself into its abeyant spatiality. Why can’t the dynamism of our societies and economies have the ability to ‘weather’ our buildings as acutely as our atmosphere? Simultaneously, an altered culture of making, derived from a culture embedded in material pragmatism, can have a profound impact on how we spatially organise our surroundings and ourselves. This is only possible, however, through the reinterpretation of the human’s natural condition. It stands to reason, then, that the opposition of nature to culture can only be overcome by radical social transformation.

In order for this transformation to occur, however, there are two global constants, of utmost importance, which must be recognised universally. The first is the total mass of our planet. The Earth weighs approximately 5.972E24 kilogrammes – a number which has never differenti-ated, in any remarkable way, since its conception. The second is the volume within the ‘habitable sphere’. This volume is defined as the space between true ground and the habitable limits of the atmosphere. We, and the natural forces of the Earth, have been altering and reconstituting the order of this volume as well as the planet’s matter since time began; digging and depositing, constantly delineating the position of true ground. Through this work, we engage with, and are part of, a series of flows. We, and everything around us, are subject to physical movements dictated not only by ‘natural law’, but also by cultural, economic and metaphysical occurrences. It is necessary, therefore, to contextualise this paper in a manner that reflects not only the architectural discussion, but also its social siting.
Material Experiment: The economic values of every element is placed within the table offering a new outlook on each one. One can make assumptions from its price about the rarity of an element, the effort required to get it to its raw state or of its usefulness within current commercial processes.

Numbers fluctuated constantly throughout the making of this graph transforming it into a living diagram.

Elements with atomic numbers greater than one hundred (Transfemion Elements) are not considered an economical viable commodity. They are used exclusively in research. They have short half-lives and are unstable. None occur naturally and all are produced in a particle accelerator.

All values on the graph are expressed per gram in US dollars and are correct at time specified at making.
| 1  | H  | 2  | Li  | 3  | Be | 4  | B  | 5  | C  | 6  | N  | 7  | O  | 8  | F  | 9  | Ne |
|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 10 | Na | 11 | Mg | 12 | Al | 13 | Si | 14 | P  | 15 | S  | 16 | Cl | 17 | Ar |
| 18 | K  | 19 | Ca | 20 | Sc | 21 | Ti | 22 | V  | 23 | Cr | 24 | Mn | 25 | Fe | 26 | Co |
| 27 | Ni | 28 | Cu | 29 | Zn | 30 | Zr | 31 | Nb | 32 | Mo | 33 | Tc | 34 | Ru | 35 | Rh |
| 36 | Pd | 37 | Ag | 38 | Cd | 39 | In | 40 | Sn | 41 | Sb | 42 | Te | 43 | I  | 44 | Xe |
| 45 | Cs | 46 | Ba | 47 | La | 48 | Ce | 49 | Pr | 50 | Nd | 51 | Pm | 52 | Sm | 53 | Eu |
| 54 | Gd | 55 | Tb | 56 | Dy | 57 | Ho | 58 | Er | 59 | Tm | 60 | Yb | 61 | Lu | 62 | Hf |
| 63 | Ta | 64 | W  | 65 | Re | 66 | Os | 67 | Ir | 68 | Pt | 69 | Au | 70 | Hg | 71 | Tl |
| 72 | Pb | 73 | Bi | 74 | Po | 75 | At | 76 | Rn | 77 | Fr | 78 | Ra | 79 | Ac | 80 | Th |
| 81 | Pa | 82 | U  | 83 | Np | 84 | Pu | 85 | Am | 86 | Cm | 87 | Bk | 88 | Cf |

**Note:** The atomic number (Z) is an integer specifying the number of protons in the nucleus of an atom. The atomic mass (A) is the sum of protons and neutrons. The periodic table is arranged in order of increasing atomic number, with elements grouped by their chemical properties. Elements are classified into groups based on their electron configurations. The periodic table is a fundamental tool in chemistry, physics, and other sciences, providing a framework for understanding the properties, reactions, and relationships of elements.
M A S S - A Treatise on Construction
Experiments in Material Culture: An investigation partially about the fallibility of material. Conducted on 25th September 2012

Materials: Sand, 1m2 Spun Silk, MDF 12mm board, Steel Nail Pins
Tools: Two Inch Paintbrush, Dustpan Brush, Hammar, Hands

Weight at Beginning of Experiment : 2.85 kg
Weight at End of Experiment : 2.31 kg

In an initial effort to test the confines of material and spatiality I continued to rearrange a body of coarse, slightly damp sand, intuitively creating volumes from its form, photographing it and repeating the process. The photographs were then reconfigured through a series of primal, almost violent, paintings, reflecting the embodied energy of the effort.

First Motion: Sand rough and congealed. Two straight lines formed
Second Motion: Sand rough and fine mix. Indents are formed in shape and hold well.
Third Motion: Sand Fine. Finer shapes and form obtained.
Fourth Motion: Sand very fine. Straight edges achieved.
Fifth Motion: Sand very fine. Holding Desired Shape well.
Sixth Motion: Sand extremely fine. Begins to hold exact inverse of motion.
The following sections are a thought experiment – a description of an imagined space. It is a projected city; a society fixated on material pragmatism. As a model, it is used to explore the monetary, societal and spatial consequences of a renewed value system. An architect, propelled into the future, recounts and documents the architectural and social facets of the New City that he experiences for a single day. It is a city that bends to the cyclical nature of un-idealised matter. One could describe it as a web - an endless field of wire and strings. Materials are contained and tied - poised rather than formed. The definitive is avoided. As an architect, he takes particular interest in how this new world is constructed but also engages with the remaining elemental rings of society. It is a world in which the concept of ‘value’ has altered so drastically that it would lie beyond the understanding of many. Consequently, ownership, and all its connotations are obscured. Along with his guide Virgil, he discovers that the commercial, educative and monetary landscapes have transformed into foreign vistas. While the human condition remains largely unaltered, his role as an architect has changed. Buildings have changed. The edifice is constructed with ‘curing’ and deconstruction in mind. Yet, he is simultaneously attracted to and abhorred by the New City, discovering that the changes he so yearns for in his professional field have come at a cost to certain essential aspects of human culture, which have, in turn, become lost in the dissolution between nature and itself. In short, it is an intellectualization of man’s revised position within a world of weight as well as an account of the architectural derivatives of such alterations.
T H E  N E W  C I T Y

A r c h i t e c t ‘ s  F i r s t  E n c o u n t e r

One of the first objects I encountered in the New City, rather symbolically, was a desk globe. It was sitting on the left of Virgil’s ancient mahogany desk, no bigger than a football and cast in a muted alloy composed of close to seventy percent iron. Its surface was beautifully embossed, the great mountain ranges softly projecting from its spherical surface like the small spines of fossilized trilobite. As you ran your hands down the outside, following the lines of longitude, you noticed how it bulged slightly at the equator, for no longer than half a second – true to form. The globe was of such an immense weight; it was near impossible to spin on its axis. Virgil, his brows furrowed, simply replied that it was ‘to scale’ when I asked why it was, as I later discovered, close to thirty-five kilogrammes in weight.

After a minute or so of further rooting, Virgil produced a 1:5,000 scale map. Spreading it across the vast desktop, he proceeded to unravel the basic geography of the New City. He begins by tracing a wide river that divides the city, with the majority of built fabric favouring the east. It is joined from the east by a small tributary and canal, all of which delineate a small river island on the north most tip of the collective. This minute expanse of land is where the city originated and one can still trace the remains of its medieval DNA within the intricate urban fabric. A sizeable patch of marshland lies to the west of the river. A small mountain range is visible to the North while the river and the city disappear quite rapidly into the wilderness of the south. Judging by the density of the figure of ground, it could not have housed more than fifty thousand. Although it was by no means vast, it would have been impossible to absorb it all. I had to return by nightfall. I consulted my wristwatch. I scarcely had thirteen hours. Virgil, head bowed, traced our route, which, he assured me, would take in the essentials of the New City.

B U I L D I N G & U N B U I L D I N G

Q u a y s i d e - 0 8 . 3 0 a m

Although keen to submerge my psyche into my new surroundings, I was particularly eager to educate myself on the burgeoning methods of construction. Virgil and I began in the southwest quarter, near the quayside, a twenty-minute brisk walk from his office, where the majority of construction and demolition was underway and where we would be assured of meeting the professionals who oversaw it. Men and women who work in the deconstruction and construction industry in the New City are collectively known as the Daidala.¹ The public seeks their counsel in the Daidala houses of which there are five in the city; the Minutor, the House of Ignis, Lignum and the House of Cassis.² The Municipal Daidala is the only house not in private ownership. It curates all State properties and public works and ensures fair dispersal of contracts between the four remaining houses. One could liken the conventional Daidala to the guild in that it is an assemblage of skilled workers whose pur-

¹ Thirty-five kilogrammes is representative of the weight of the planet at the scale of a football, calculable by applying the average density of the earth to the volume of a ball.

² The term ‘Daidala’ (transformed here into the collective noun) is a type of sculpture said to be created by Daedalus, father of Icarus and legendary craftsman. (Donohue, Xoana and the origins of Greek sculpture (Scholars Press, 1988) 182). In an annual festival a deity of the Daidala is burnt.

³ Minutor (Latin for Miner), Ignis (Latin for Fire), Lignum (Latin for Wood or Woody Tissue), Cassis (Latin for Metal Wearer, Bearer of Metal or Metal Helmet) – the names here are chosen to specifically reflect the material speciality of the Daidala House. The names are also selected to represent the necessity for both specific material and specialized action within the transformative process.
pose it is, not only to perform the function they were trained for, but also to educate new members. However, it is no longer a tool for political lobbying or trade monopolizing; it is, fundamentally, an assemblage of bodies. There is no handbook – only hands and the adroitness that they possess. Information is fragmented, dispersed amongst the minds of its members. They are bound together by common knowledge and by singular thought.

Once one becomes versed in the aesthetic eccentricities of a Daidalador, one can pick them out of a crowd with alarming frequency. They are characterized by their blackened fingers - an unfortunate consequence of working with carbon daily. When they walk, they jingle almost comically, as the small tools they are required to carry at all times jostle around in their vast canvas pockets. Once called upon, they assemble on rubble; spread their drawings over old planks or across dry pavements, and strategize about the task ahead. Each man or woman within the Daidala has a thorough knowledge of basic joinery, smelting, pyrotechnics and thatching. Naturally, scaffolding is a weighty part of a Daidalador’s education. Although, often considered a secondary construction, the scaffold is judged with an equally keen eye. They have been disciplined in the sciences and frequently apply their biological and chemical knowledge of materials to the scheme. Most importantly however, the Daidala are versed in the nature of time. Like meteorologists, they study the atmosphere, continually reassessing and documenting material degradation within their specific sphere of interest. Virgil indicated towards them as we walked through the quayside. Even from a distance, the intensity of their concentration was palpable, as they pressed, scraped and smelt vast expanses of ancient masonry and bleached concrete in the morning sun, reading their etched surface like an almanac.

The deconstruction of an edifice is a joyous affair – a spectacle for all to enjoy. Crowds gather for the most dramatic moments. It is not uncommon to see several members of the public, usually the elderly, enjoying this marvel from a bench at a safe distance. For them, it is almost ceremonial – borderline religious. They watch, as rubble becomes masonry, doors become fuel, glass panes become cheap beer bottles. The movement seems to fascinate them. It is quite an odd element of the human psyche, that we are consummately fascinated with death and injury.

A small building, no more than thirty square metres on the ground, constructed by the Daidala itself, was undergoing deconstruction by the quayside as we approached. It was extraordinary to witness. Initially a large pit was dug to the east where a small patch of uncapped land lay on the periphery of the plot. The loose soil from the excavation was then transferred by wheelbarrow to the interior space of the building, left in large mounds and tossed occasionally by those inside. One of the slighter Daidaladors, a young man not long out of his teens, then squeezed into the wall through the small door provided at the south end of the edifice. The others stood well clear, suspended in the expectant lull, their chests still heaving from the exertion. For a few long moments, nothing happened. A woman walking a rather yappy Jack Russell paused in anticipation
on the opposite pavement. The jagged sound of metal upon metal echoed around the large cavity. Inside, he slowly severed the cords. I held my breath. Surely, I thought, this is far too dangerous a task for bare hands? Long, thin panels of precast concrete began falling with no apparent urgency towards the soft, airy mounds of soil at their toes. The freshly tossed earth cushioned their fall and the panels remained undamaged save for a few superficial chips at the edges. The young man stood, unscathed and wholly unperturbed amongst the dust, pocketing his tools. Over the next few hours, the wood, scrapped from the rafters and partitions were thrown in the pit and lit. Once an adequate temperature was reached, the screws, nails and ironmongery were smelted and the tools and scaffolding joints for the next job were made. Re-evaluating the distinction between tool and material has drastically altered the manner in which the New Citizens construct. The tool is consumed, bitten and spat out in some glorious new form with each respective project.

There is a certain primordialism to the manner in which they work. It is almost as if the same primitive intuition at work in 3000 BC, when the Egyptians were using mud and straw to make bricks and adding lime to mortar, is at play here. Virgil explains that each Daidala house has their own distinctive alchemical processes, some favouring smelting, others preferring grinding. Construction, too, holds similar differentiations. The only moment one can liken it to is the erection of huge oak frames – perhaps for barn or house construction in times past. The material is hoisted, usually using only manpower and a series of clever pulleys. It requires multiple hands and is enjoyed by many. They apply the same logic to construction as they do to the felling of a building. Steel shuttering is used for roof construction. The earth, removed to create foundations is, sometimes, piled high and used as primitive scaffolding as the edifice reaches skyward. Huge columns with great bulbous bases are cast in metal on site and filled with fine sand. Each material bears its mark upon the other. Details, in their culture, are seen as complicated agglomerations of materials that infrequently appear in that order in the natural world. The New Citizens strive to build in order to reorder. The intention isn’t necessarily to return the components ‘to the earth’ but rather that they retain their usefulness somewhere in the habitable sphere.

Their detail drawings no longer communicate in a language of parts. They have transformed into something far more alchemic and contain chemical formulae as well as chronological speculations. Virgil and I approached a Daidalador on the aforementioned deconstruction site and asked for a glimpse at their drawings. The gentleman kindly obliged, immediately handing over the large document book in his hands. At first glance, they resemble astrological charts; intricate, formed of a complex geometry which only can be deciphered by the trained eye. However, after quickly studying the key provided, they slowly, magically, begin to reveal themselves. There are a thousand things touching. Metal, molten and glorious, is strapped to concrete, matte and sturdy. Timber kisses aluminium. Glass merely acknowledges its companions, allowing only a sliver of its plasmid surface to be encased. There is always an exchange. Steel stain concrete, oozing red and orange from its open mouth. Wood is dampened by rock. Air devours copper, oxidising its surface into a mint
green sea. And nothing levitates - nothing is dishonest. Every alabaster bolt, every fleck of plaster is connected – establishing a wholeness which immediately generates an entropic relationship with ‘outside’. Their drawings are documents of convoluted and beautiful shells that concoct a specific atmosphere in which each piece has a distinct role to play. Not since perhaps the Smithsons have the inherent properties of raw materials been embraced in construction on such a scale and with such vigour. Buildings have reverted from hollows of mass and compression to matter, held by tension, ready to fall. They exist; sing even, within a perceptible diurnal rhythm. I was enthralled.

[block]

CITY CORE - 12.30 PM

As we travelled west from the river, closer to the city core, the fabric densified. Thin streets merged, unexpectedly, into small plazas. As you walk, extending hands from wall to wall you catch whispers of informal courtyards, of great public stairways cast in rickety metals extending to rooftops or some unexpected patch of elevated ground. There were walls of concrete, of iron, of mud at every turn. It was both dizzying and astonishing. Housing and apartments were most frequently arranged around the open yards, making the most of the sparse winter light. Small shops and vendors lay next to cavernous chain stores while great multi-story car parks occupied the edges before the roadways. Virgil led me up a winding brick stair, to the roof level of the tallest building within the assembly. From here, we had a fantastic vantage point. Virgil explains, ‘The roadways transect the blocks at varying moments. Subsequently, they are connected under the roadway or, occasionally, by footbridges where the adjacent buildings allow it. Each patch, if you will, is subject to regulations. A certain percentage must be vegetated for example. There is also a cap on the amount of floor space permitted to be constructed.’ What seemed, from this rooftop, to be a jumble of urban theory was, in fact, highly structured.

The scope must exist to redefine their surroundings into a theatre of the new. It is expected to change. It needs to change. Virgil explains, ‘the New Citizen architect, as a professional who deals in the currencies of time and value, must continually reassess the cultural value of a certain spatiality and ascertain whether or not they are worth preserving. Buildings, or built works, often become suspended in time, mass manifestations of a value system that is no longer at play. They transcend their original use and become ‘fine examples of that period’. It is no longer simply a matter of urban proxemics.’ This is greatly discouraged. One Daidalador exclaimed, ‘We cannot live in a city of fine examples!’ The ‘urban artifact’ is as abhorred as the ancient object. The city fabric is, therefore, in a constant state of metamorphosis – completely disassembling its parts and reconstituting these components to form altered spatialities. The concept of the conventional solid block and the street...
has dissolved. There is only outside and ‘true inside’ (meaning it is bounded on every plane) as the boundaries between the two are continually reinvented through a complete engagement with materials. Even within the construction or deconstruction process, a spatial and programmatic exchange is constantly at play. Extraction and displacement are applicable, not only to material culture, but also to spatial reasoning. Embracing this has been extremely successful. I witnessed a great richness to urban life. The footprint of the former edifice provides informal outdoor space for the public during soil recovery. The rising structural spines of public works become beautiful spaces for relaxing or other simple activities. There is no extraordinary rush. Each phase of construction or disassembly enjoys its own moment in time.

The sewerage works were extraordinary. As Virgil and I wandered down a particularly wide pass between zones we encountered great cast vents, projecting, serpentine-like, from the pavements into the air. Virgil explains, ‘when we intervene with the landscape it must be accepted that our interventions are not foreign objects – the land, the soil, the elements are all part of a living system and, eventually, our constructed objects become as integral to the landscape as the rocks or the rain. Therefore, there is the city of above and the city of below.’ I quickly realized that the lean heads of vents were only a small indication of what fantastical system spanned beneath the pavement. It is the metropolis of the sewer, of the storm water pipe, of the ancient basement or the iceberg column that lays concealed but is, perhaps, the more extraordinary than what it supports. Virgil explains that the built city, as well as the great vaulted pipes under our feet, is seen as supportive fabric, woven together to carry and filter the water that falls upon it. It is elemental; there is the architecture of the earth and the architecture of the air. The ‘above’ and the ‘below’ are extensively discussed within the Daidala. They say that ‘they are in conversation’. The air continually reforms the ground but nothing can exist in the air without the ground. They excavate in search of bedrock, a hard surface on which they may either rest specific supports or, alternatively, establish a new horizontal constructed plane. Virgil continues, ‘Ground is volatile, unpredictable even. It differs from water in a sense – the lives it supports are considered components of the earth rather than inhabitants. It is a vast collection of particles, some living, some inanimate, some useful, some toxic. We are simply potters, spinning earth, launching it into the sky.’

**EDUCATION & FUTURES**

*School of Saints - 15:30 pm*

The school, and indeed the educational landscape, has altered beyond recognition. We visited a small school of just over three hundred pupils in the northwest of the New City on our way to East quarter. While there were still some ‘permanent’ fixtures such as bathroom and wash facilities,
The school was largely composed of tents. Constructed from simple aluminum frames and covered in a high performance insulating fabric, both the teachers and the students had the opportunity to reform and reimagine the confines of the classroom as they saw fit. I witnessed one particularly spectacular chemistry lesson where the roof was detached in the morning and the students spent the designated hour sending huge jets of candy pink foam into the air.

Education has become de-compartmentalized. English books contain musical scores; mathematics is taught as a language and the sciences are fused with business concepts. Geography, as a subject, covers the scale of the atom, the vastness of our universe and all that exists in between. The purpose of schooling is to communicate what is essentially a wholeness – and that the physical, metaphorical and existential layers of our planet are all intertwined and self-reliant. It was a dawn of a new Axial Age. Even the weakest of students are able to follow complicated mathematical formulae and calculate probabilities – essential for meteorological studies. By the age of ten, they can read and predict sequences as if they were the alphabet. One student wrote an extensive paper detailing the chemical functions of the endocrine system for what, for all purposes, we would recognize as an English language assignment. A teacher, Beatrice, who was kind enough to give us a tour of the school grounds, explained, ‘the level of information we have acquired as a global family is so vast, so readily available, that it became almost impossible to give the students a well rounded education, even in a single subject. For decades, we were simply summarizing, forcing the students to ‘learn off’ the important points – teaching them to answer questions on comprehensions without actually comprehending them. Instead, what we teach now is methodology, ways of seeing and interpreting the colossal amount of data at their fingertips. They all have developed their own personal interests, whether it be online gaming or Shakespearean drama and, here, they pursue them in the most vigorous manner possible.’ The students learn through research, interpretation and application.

Death is seen as a return to the earth, as a re-engagement with the cycles that brought them into being. From both the surroundings I witnessed, and from conversation with Virgil, one can deduce that there is a quasi-religious relationship with ground. They call it ‘heaven in earth’.

However, conventional burial of corpses is only permitted when a special licence is granted. These slips cannot be obtained post mortem and are rarely issued. Although it upset those with slightly more archaic values, this move was necessary. The detritus of the famous, intelligent or worshipped had gained mystical value amongst certain eccentrics. Virgil explained that grave robbery became rampant for a period, with the remains of the deceased ground into a fine powder. This was often

\[\text{Axial Age, coined by philosopher Karl Jaspers, refers to the period 800 to 200 BC. During this time, similarly revolutionary thinking, that would alter the social environment, was independently conceived in India, Persia, Judea and Greece. (Meister, Chad, Introducing Philosophy of Religion (Routledge, Abingdon, 2009) p 10.}\]
inhaled or sold in tablet form for an extortionate price. There were also cases of outright cannibalism with an outbreak in certain infectious diseases as a consequence. Lesions of the brain were a common thread between the more ‘active’ patients. I was both disgusted and perplexed. On paper, this seemed to be a world inherently devoid of myth. The majority of corpses have been exhumed, the ground deconsecrated and an alternative use found for the land. A graveyard still remains in the extreme east of the city. As we left the core, the earth began to flatten and plots began to form recognizable urban patterns. We arrived at the gates with ease as the laneways were relatively deserted. Virgil stops my entering; informing me that it is now heavily guarded. The graveyard lies adjacent to the city mental hospital. He informs me that it was forced to close its east wing as the views of the graveyard were said to have aggravated certain patients, many of whom were institutionalized for cannibalism. Now, the convention is for the body to be cremated and the energy stored within a small battery, which given to those closest to the deceased. Often these batteries are used to power small lamps, known as black lights, which loved ones keep in their homes. It is not uncommon for families to hold vigils for days until the light diminishes. This practice is usually carried out after the death of a child.

Historical museums are sources of dark, and often sordid, entertainment. One would liken them to a ‘freak show’ or a mildly grotesque Victorian circus, featuring Celtic filigree broaches instead of bearded ladies. No longer great white marbled caverns, one can find the local museum concealed within the decrepit city block, nestled between tattoo parlours and dank curry houses. A small neon sign reading ‘Artifacts – 24 hrs’, the sole object denoting ingress, flickers and spits outside one such museum in the northeast quarter. Appalled, I stopped dead on my tracks. Virgil encouraged me to go in but remained himself on the pavement outside. Inside, the rarities were dimly lit and centrally placed in a series of small chambers. The darkness that surrounded the cases was littered with a flock of velvet poufs so rife with dirt and microscopic life, it came as a surprise that they didn’t talk back to the patrons. There were dozens of beautiful and rare artifacts in every small cell, blinking ashamedly from their stands. The curator informed me that they do a steady trade, the primary clients being rogue historians or curious teenagers for whom artifacts have taken on some strange form of pseudo-sexual value. While it is not necessarily frowned upon to pay a visit to a museum, the whole concept is baffling to the general public.

The technology exists to document the Celtic filigree brooch down to its atomic scale. Naturally, it can be reproduced on screens, in holograms or even printed if you so wished. Virgil demonstrated from his office later that day, when my time in the New City was near spent, reproducing the sensation of the metal against your fingertip; the specific sound it makes when placed upon a metal table, even its smell. Realistically, it doesn’t need to exist in physical

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7 Transmissible spongiform encephalopathy, also known as Prions Diseases is a progressive set of conditions generally thought to be transmitted through prions (an infectious agent in the form of a misfolded protein). The routine consumption of human flesh allows this protein to build up generationally, eventually resulting in the degeneration of brain tissue. (Bastian FO, Sanders DE, Forbes WA, Hagus SD, Walker JV, Henk WG, Exright FM, Elzer PH (2007). “Spiroplasma spp. from transmissible spongiform encephalopathy brains or ticks induce spongiform encephalopathy in ruminants”. J Med Microbiol. 56 (9): 1235–1242.)
It is widely regarded as an indulgence. Although they stopped producing or idolizing artifacts, it was still difficult to define a use for them. The Government, it was thought, possess over ninety percent of the country’s historical cache—known on all official documentation as ‘Inritus Irritus’. No one seemed clear as to the location of this vast cabinet of curiosities and what their current plans were for the thousands of tonnes of marble and metal were a mystery. A rumour circulated amongst the less reliable newsrooms that eleven bronze statues were smelted and cast into a very fine bath, which was subsequently installed in a judge’s chambers in the local courthouse. Naturally, this was later disproved.

The book, truly, is the only historical object that has defied these newfound social conventions. It is odd considering technology can communicate its contents so effectively. Naturally, a lot fewer books are physically printed and if so, they are incredibly expensive to purchase. The library survives. In the New City this ancient edifice lies south of the canal, its thick stonewalls punctuated occasionally with a small window. Reliant, dry, and with sparse natural light, it is the ideal home for the city’s literary repertoire. It carries two copies of most of its texts (one for public viewing and the other safely stored in its depths). The upper floors are occupied by a litany of desks and mismatched chairs providing comfortable and warm seating to readers who are surrounded by the most popular reads. Beneath their feet, however, lies a great mechanical cavern, containing in the region of a half a million titles. Virgil asked the librarian to open up the vaults for a small tour. I was startled when she, albeit reluctantly, agreed. Beneath a substantial ‘trapdoor’, lay a gaping paper ravine. Endless rows of immense mechanical shelving, extending far beyond the footprint of the library’s four walls, stood regally with scarcely a centimetre between them. These great grey soldiers were punctuated occasionally by slender glass cases. Vacuum-sealed and softly up-lit, these contained the titles nearing extinction. The slight glow from the glass, in this canyon of metal was eerie. They were ghosts amongst men. Nicknamed ‘The Arc’ locally; the library has a reassuring presence in the city. It is customary to run one’s hand along one particular cornerstone as you walk by. The rock in question is shiny, – polished by a thousand hands. The fear of losing everything if the lights go out hasn’t faded. There are many who believe that, someday, someone will pull the plug on humanity. It is the words beyond anything else that they dread losing. They are less concerned with the image. Over time, they found the written sources on particular topics to be less and less reliable. Education, as explained, is now heavily reliant on self-lead research. Although the majority of literature can be found online, secondary sources are proving troublesome. Historical fact and theory have become skewed as they are propelled into the exorbitantly large public information sphere by those ill qualified to comment. This phenomenon is known as Chinese Whispers.
It is acknowledged that the process of working with a material degrades it. It changes it. The loose bonds, forged by nature, are quickly eroded by the human hand. As the material becomes increasingly more refined, its form, and the manner in which they work with it, alters. Eventually, they must seek alternative ways to control it. Matter, truly, is of no use to the New Citizens diluted and spread in a fine film over long distances. Dust is the enemy of the city. It is, however, inevitable. The continued reformation of their built environment has generated excessive amounts of fine debris. The fear of global entropy has become popular, achieving cult status amongst the band of ecophiles who idolized the hole in the ozone in our time. They believe that such material dilution will degrade all matter and energy into an ultimate state of inert uniformity. They create vessels to control it. The desired mass in buildings is commonly achieved with earth filled masonry. The earth is returned to the expanse of ground again once it is aerated. In this case, the shell, or the binding material, thus, is the only matter that demands reuse.

Recycling, or even up-cycling, has also become obscured. They have come to realise that even if you abolish the notion of down-cycling, it is inevitable that the material, even if re-engaged with the same production process that gave it certain form, will degenerate. The streets are swept and the dust gathered in huge silos in the south, which formerly held grain. Here the dust is filtered and sieved, categorized and refined and used for low grade 3D printing. As we pass these immense containers, Virgil explains, ‘a sole of a shoe will wear away after a year of continuous use. Even if it only loses half a percent of its total mass to the atmosphere, the cumulative value in a million pairs is significant – five thousand soles to be precise. It seems natural for them that certain materials should engage with different cycles. We firmly believe in a process of maturation, like fine wines. We allow matter to reorder, and find a more suitable use for it in its ‘fermented’ state. Often this is burning, or in the case of chemically untreated materials, fertilization. Materials are often left to cure. Temporary structures erected during a particularly lengthy construction process are often utilised as a means of either testing the affects of weathering or preparing the materials. The pursuit of form is still of utmost importance but, now, they recognise it as something that alters with time, and inversely, affects it.

There are many new technological and chemical advances that have had the Daidala houses buzzing. Rumours are circulating that a bonding agent, capable of chemically dissolving mortar, has been developed. A deleterious substance that, when applied, could degrade the structure so viciously that the blocks would come clean way, ready to be reused, would revolutionize masonry once again for the Daidala. At this time, it is impossible to physically dismantle bonded blocks without
degrading their surface or form. Reuse or reshaping only succeeds in degrading them further. They are rarely used now in construction, with much of the knowledge of masonry dying with the demand. With little necessity for it, the Daidala find it difficult to find the financial justification to train their members in traditional masonry. I expressed the anguish I felt at the loss of such an ancient skill. As we began our walk back, Virgil began to unravel some of the more astute economic demands that have reconstructed the building trade.

**I N S T I T U T I O N & E C O N O M Y**

*Riverside - 20.30 am*

Once coming of age a ‘weight’ is assigned to each citizen. This number is the culmination of all the physical matter in your ownership (this only applies to matter for which currency exchanged hands – it excludes scrappage). This mass is used as a means of applying taxation levies on the populace. While some take great pride in amassing a grotesque ‘weight’, it is generally considered in poor taste to be ‘fat’. This, apparently, is relatively easy to track given all fiscal transactions are now carried out electronically. When you receive a gift, however, the recipient must acknowledge possession on their online database. The amount of physical pieces in the New Citizen’s possession has greatly reduced. The objects in their ownership are perceived as extensions of the self, as essential to personal identity as eye colour or shoe size. All items, therefore, are carefully selected and maintained. I found this lack of distinction between body and object particularly difficult to grasp. Reusable containers, in a cornucopia of materials, are essential when purchasing foodstuffs. Packaging is used sparingly and only for hygiene purposes. Technological devices are very successfully disassembled and reused and, therefore, have a high turnover. Electronic or mechanical objects are some of the few objects still mass-produced. Out of curiosity, I asked Virgil on our walk back north how much he ‘weighed’? He refused to tell me. All I can ascertain from his response is that it must be as taboo as asking a woman her age.

Every piece of built fabric is detailed in public records and the information is meticulously collated. This had lead to many wonderful insights into the built environment. The total mass of steel, for example, in a certain city block can be obtained. The weight of a city, and of a street, quickly become means of interpreting historical context. Population, size (in kilometres squared) and weight are now listed in information under every capital city, in every atlas of recent publication. The tourism boards in various states have used the most prominent material properties of their cities as lures in advertisements. They have concocted various slogans such as ‘the Weightiest City in the West’ and ‘the Iron King of the Metal Metropolis’ as means to draw the curious traveller. This is mildly baffling, considering these properties are largely imperceptible at street level. Yet the very fabric of
a place has become the ultimate tell of its character.

The information necessary for such insights is obtained from QS records and material purchases or, in some cases, from the detailed documents of the Daidala. A primary estimation is submitted with a planning application and a completed log presented and verified before the city may sign off on a building, roadway, etc. This log, if you will, is essential for the process of deconstruction. The implied energy of the edifice can be calculated in advance and the most efficient use of materials devised. Materials from deconstruction can be sold privately. Alternatively, they can be donated to the city for which the owner receives tax relief. The Daidala carrying out the work, one should also note, is entitled to a certain percentage of material as well as a fiscal reward.

A monetary allowance is also put in place for the deconstruction of any edifice. This allowance is added to the fiscal asking price of a building or work and is 'paid for' by the potential buyer. Even if this allowance is subject to interest and growth, the total sum, including interest, becomes part of the buildings value. Ideally, if labour costs increase, the growth of this fund would meet that need. However, any funds that remain after the completion of the works are released to the current proprietor and are not subject to income tax.

The periodic table of elements is a prominent display on the stock market floor. Not only does this famous graphic contain the atomic numbers of the building blocks of their world but also their economic value in real time. The chart, once a stagnant diagram of inherent physicality, blinks and changes as the materiality of our planet is dually comprehended – both for its physical and economic properties. Thus, location, desirability, as well as material composition, are all factors in property and stock evaluation. The values of materials are assessed according to two criteria - rarity and their 'raw state'. The New Citizens have created a scale delineating the joules required to transform it back to a useful molecular state. In this regard, economies are never stagnant as materials continually fall in and out of favour. The material is assessed according to the percentage state it occupies within the usable or obtainable sphere of matter. It seems immensely complicated. Virgil showed me the various tables and charts on his tablet, assuring me that it is relatively easy to follow. He launched into a lengthy description of a startlingly convoluted spider diagram on our return to his office. All I caught was that it had been a good day for beryllium.

S K Y

V ir g i l's O f f i c e - 2 1 . 3 0 p m

There were many aspects of the New City society that I still grapple with. Physical time is no longer measured in strata. They no longer dig to discover. Landfills have become archaeological sites –
places of deep cultural fascination for the populace. Beyond this, there is a nauseating sense that everything is in motion.

As the day drew to a close, Virgil suggested we conclude our escapade on the small balcony adjacent to his office. Meteorologists had promised a clear night sky, a rarity in the New City. The balcony was just large enough in depth to accommodate two dark leather chairs, which looked suspiciously like diluted derivatives of the LC4 Chaise Lounge. Joining Virgil outside, I quickly noticed dozens of fellow ‘starry night’ enthusiasts on the terraces and balconies of the surrounding buildings. Sitting upright, I stared at my feet, at the sparse layer of dust that painted the leather soles. Virgil indicated that I should lie down, beckoning upwards towards the night sky that was slowly clearing above us. He lay in a state of complete placidity. After a few moments of confusion, I quickly realized that I wasn’t bearing witness to the ramblings of a romantic; it wasn’t the stars or the heavens they were revering. It was what lay between them. The black. The deep, paltry black. In a world where everything was full, where identity and materiality were as one, it made sense that ‘nothing’ was enthralling, even, perhaps, impossible to grasp. The remaining whisper of grey cirrus began to dissipate. And there was silence. Complete silence.

When the cloud returned, I did too.
Historically, man’s perceived relationship with nature has been tumultuous, be it the exploitative nature of the industrialist or the archaic misconceptions of the Romantics. Now, however, we are drifting towards a moment in human time when we have the ability to manufacture objects or conditions from the atom outward – a time when matter will increasingly negate the innate state of rest dictated by ‘natural law’. Every fibre of mass within reach will be transformed into artifact. It will be a world where material and space, over fuel and energy, will emerge as primary global commodities.

We are calling for universality, for a method of connecting each leaf of our broadening understanding. However, it is not as simple as defining ourselves as a brief moment within a cyclical torrent of mass. We must continually reproduce the objects necessary for our existence, an action that is only plausible when we begin to establish social relations. The momentous transformations that have occurred, even within the last century, make it impossible for mankind to define its condition within historical precedent. To return to a complete state of nature would warrant not only the negation of fundamental human characteristics, but also the dissolution of the physical infrastructure that incubates societal necessities. This is only truly plausible if the tool warranted to complete this action consumes itself in the transformative process.

The New City embodies a proposal that favours neither nature nor culture. The occupants construct their cities, their economies and their identities from a knowledge of material limitations. Architecture, long conceived as the destruction of site, now exerts a duty of care over the material it harbors, which extends to the ground it rests on. Space, conceptually, is reconceived and continually renegotiated. Fundamentally, the New City spatially and economically interrogates a proposal for a new construction methodology. It is a methodology based on a projected assemblage of values – a set of values which respond to observable changes in our current environment.

The New City is, somewhat ironically, the completed object. It is the zenith of this particular line of thinking, where both citizen and city are transformed and transformable. The built proposal, therefore, is a series of confines for a new typological urban structure - a precursor to New City that seeks to translate the nomenclature of this episteme. This is the space these thoughts will inhabit, alter, generating from its confines the vision for architecture unconfined by cultural boundaries or organic sensation. It is simply called Non-City.
Non City is the typological structure that has emerged from the theorization of New City. It is defined by a series of distinctive spatial and architectural traits. Four terms are initially defined for the purpose of clarity.

'Monument'

The term ‘Monument’ is reduced to its etymological origins and its deemed within this chapter to simply mean a structure that ‘reminds’. From the Latin ‘monere’ to remind or warn. (James Robert Vernam Marchant, Joseph Fletcher Charles, Cassell’s Latin Dictionary (Cassell, London, 1892).

'Line'

The line in conventional architectural representation is used to bind a desired volume of space or to indicate the order of assemblage for a particular material.

Yet the line can be considered as an entity in itself. The line can be conceived as the result of the motion of a point, the motion of a foot on ground. Indeed, wherever we go, wherever we assemble, we generate lines. Alternatively, it need not be physical to exist. It may indicate the desired pathway for matter, a point of folding, torsion or extrusion. It is entirely plausible, therefore, to consider that a building can be spatialised on paper without ever drawing a wall or a door.

'Cenotaph'

Cenotaph is interpreted as a space for dissolution or death but does not yet contain it. I conceive the cenotaph to be a structure built in the presence of its own destruction but as a built vessel it may never contain it. From French cenotaphé, from Latin cenotaphium, from Greek kenophé, from kenos “empty” and taphos meaning “tomb, burial, funeral,” (James Robert Vernam Marchant, Joseph Fletcher Charles, Cassell’s Latin Dictionary (Cassell, London, 1892).

'Civic'

From original Latin ‘Corona Civica’ meaning ‘Civic Crown’ - a chaplet of oak leaves given to a citizen who saved the life of another in battle. It is also a derivitive of ‘citizen’ - those who live in the city. The use of the term ‘civic’, therefore, is an important one. It implies that, as a proposal, Non-City is, indeed, in aid of the city itself. (James Robert Vernam Marchant, Joseph Fletcher Charles, Cassell’s Latin Dictionary (Cassell, London, 1892).
Non-City begins with a line.
The first true erection of matter is the construction of the wall. It is the first to be begun but the last to be completed. It defines itself and its contents as separate from city. It is a space intended to mitigate social transformation. The wall, its robust encasing, is the most vital, the most spectacular of the monuments. It gives rise to the rest, permits their creation and their reinvention. It contains all access and entry. Its delineation immediately generates a field of action. As a civic presence, it is a building that mediates the tension between the proposition and the fabric of the existing.

It is a building without image, a subversion of the conventional urban block that is neither park nor courtyard. It is simply a cenotaph for the monad. It serves no other singularity of space other than itself. It is a meta-fictional apparatus, a distinctive piece of non-city in an urban cage.

It is a monument field. It sets out to remind however, not of the past, but of the potentialities of the future. Therefore, it is a specific space of experimentation and projection.

Non-City’s primary mode of space making is extraction, a methodology that immediately establishes an axis for potential subterranean servicing of the New City. It feeds on the dialogue between disturbed ground and constructed architectural object.

Non-City must embody the potential for disassembly or reinvention within its walls. As soon as it transcends into a cultural object, its purpose is moot and must immediately be reconfigured or deconstructed entirely. It is at this moment that a dialogue between the constructed edifice and the political connotations of its eventual disassembly is established. It accepts that this is inevitable and is prepared to embrace it. It will be a spectacle – a civic beacon, a building that people process rather than processes people.

Non-City is not a utopian construct. Sociologically, it is equally concerned with what lies outside its confines. It is sited, albeit begrudgingly, within a specific set of geological conditions. It stands in opposition to city. Foucault would define it as a heterotopia, an ‘other space’.
Transfer 3,000 kg of Earth from X1, Z1, X3 and Z3 to Zone C1/2.
Transfer 25,000 kg of Earth from Y1/B1 and leave north of excavation.

Excavate 21,000 kg of Earth along Y axis and deposit on the same axis to the South in C2.
Establish fire pits East and West of this excavation on the 1 axis.

Establish structural supports with Earth from excavation (2) and board between.

Establish fire pit next to excavation 2.
Pour first cast at column points.

Remove fire pit East of Y axis.
Gather 3,000 kg of Earth from excavation (2) and pile around circumference of column pits at X1 and Z1.
Gather 3,000 kg of Earth from excavation (2) and pile around circumference of column pits at X3 and Z3.

Remove 12,000 kg of Earth from around column pits after casting and use to fill excavation (2). Establish stabilizing frame.
Move fire pit from South of Y axis to center between 2 and 3 axis.
Establish lateral wooden plane from column supports.
LEFT: Experiments in Material Culture: Four Columns and a Plinth; an Alchemic Spatialisation of its Construction.

A series of drawings were constructed that sought to explore the physical and alchemical process of building, ‘deconstructing’ the act into a series weight based instructions.

Part of a series of instruction based drawings this ‘experiment’ attempts to revitalize the construction document. Using a simple grid system (6 lines of axis and 2 interlocking circular bodies of space) the movement of mass is planned and mapped that utilizes its inherent properties to the fullest.

The energy required to complete the process (whether through manpower or machinery) can be calculated by cross referencing the mass or weight of the object to be moved and the desired distance.

Below: Model taken at stage three of process

RIGHT: Experiments in Material Culture: The Making of a City Block.

Building on the methodology established in the previous experiment, an imagined city blocks construction is drawn. Using a kiln that grows in volume, and the outermost space of two cranes that become structural elements, a block is made that consumes the tools of its construction in the process.
DETAIL STUDIES

Experiment through Detail; exploring the assembly and disassembly process for a series of simple details.
Foundation Type Required

Approximate Weight: 12,000 kg

Tension Panels Drawing

Drawing Completed: 11/12/12

Detail - Tension Panel Drawing: Plan and Section

200 mm

500 mm

Tension Tie

Bolt Plate

Concrete Panel

Steel Bracing

Stabilising Rod
Experiments in Material Culture: Minimum Public Buildings. Explorations in Model about creating buildings without rooms. A series of three mass constructions set into a landscape of extractions.
Minimum Public Buildings
A spatial experiment that investigates what is the minimum built definition of a public building or room.
Above: Non-City initial concept drawing showing walled structure, disparate entrances and tower-like constructions.

Right: Non-City progression and programatic development.
It is a medium for constant speculation. It has eaten an island, seen thick, heroic walls rise and fall, it has risen from Shannon’s saliva and built up order on a bed of disarray. It has dug deep, chopping the earth and rock and placing it in tall towers that rest on the sky.

From its origins as a Viking settlement in 812 AD to the imposition of the Georgian Grid in Newtown Pery in the late 18th century, Limerick has consistently been erecting walls, delineating zones of difference and using rock and earth as political and progressive forces. Georgian Limerick, built a plinth upon the waters edge, established a serpentine series of culverts beneath the street that service the Georgian terraces. They dispel their output at six locations along the rivers edge.

Limerick is reinterpreted through a series of simple geographical and historical maps, the contents of which allow us to view the city as a convoluted array of artificial strata. It is at this moment that the line of thought, its origin being future oriented, begins to communicate with the past. Depicted in the following pages are three maps; a map of the location of all the original quarries in Limerick, a map of the limestone buildings erected from the fruits of these quarries or from the quarries of Limerick’s environs and a site map.

Site

The site is established. Its position creates an axis from the east edge of the Georgian grid to the bed of the River Shannon. It lies in a historic zone of extraction. This axis follows the line of a gentle slope down to the waters edge. It lies on the edge of built ground, on a height, establishing a vantage point over the entirety of the Georgian speculation, ready to re-speculate.
Non-City Model - Documenting the Growth of the Wall that begins to stretch and consume the City.
Delineate points of geographical importance within the confines of New City and in relation to the City. Points are selected at the following locations (latitude, longitude):

- O-1: 52.664528, -8.629010
- O-2: 52.662225, -8.622808
- O-3: 52.661014, -8.633258
- O-4: 52.659179, -8.628623
- O-5: 52.6599, -8.6376
- O-6: 52.65016, -8.631928

The undulations are marked by lines in plan. The assortment of rubble into a distinct spatial rhythm is essential. See fig. 3 for plausible layout. Sufficient distance is left between the mounds allowing for vehicular access when rubble is reconfigured.

Remove railings of People's Park. Re-use metal as necessary. Beginning with the original line of the west wall of Non City, name these lines L1, L2, etc., working from right to left until River Shannon is reached.
The Politics of Unbuilding Diagram

Each ‘block’, its origin being a circle, is its own political entity, delineated from its neighbour by a ‘zone of expansion’. The block may expand and contract freely within this zone, maintaining a maximum 7:3 Built to Unbuilt Ratio. It may also grow into the ‘Zone of Mitigated Expansion’ with permission of the blocks bordering this linear zone. A minimum line is maintained between neighbours which can be abolished if two or more blocks establish a political merger. The 7:3 ratio, however, must still be maintained. Blocks, however, cannot disparately merge. An allegiance cannot be forged over a N/S block axis. The rectangles represent a single block’s potential for fullest expansion. Their tapered edges form common land, exempt from the politics of the blocks.
Mass - A Treatise on Construction

Section I

<table>
<thead>
<tr>
<th>Length of Axis</th>
<th>Area of Zone (m²)</th>
<th>Altitude</th>
<th>Section Line</th>
<th>Latitude</th>
<th>Longitude</th>
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Cubic Meters of Earth in Zone (taking the depth to be 6m)

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<th></th>
<th>Tonnes of Earth</th>
<th>Joules Required to move mass a distance of 10m</th>
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<td>* Formula for Calculation</td>
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Power = Energy Flow per Unit Time

Referential Diagram. Please consult for the following information if required:
- Weight of Soil at a depth of 6m from ground level within each undulation.
- Energy or Joules required to move an ascertained mass of soil. Movement Figures are given at a distance of 10m for convenience.
- Exact Geographical Location of Intended Interventions
- Time and Man Hours Required to carry out each phase.
- Required Sectional Information

Geographical Points are joined creating three new axis within the New City.

The following points are joined.
- O-1 to O-2
- O-3 to O-4
- O-5 to O-6

These areas must immediately be delineated by earth.

Please consult fig 6 for instructions.

Taking an area of 140m x 80m at the northmost tip of the area between L4 and L3, transfer soil along O-1/O-2 axis to a height not exceeding 2m.

Repeat process along O-3/O-4 axis at area shown directly south of the axis in the area between L6 and L5.

Repeat process along O-5/O-6 axis at area shown directly south of the axis in the area between L7 and L6.

These areas marked X in plan should be close to or at the level of the undulated directly west after this intervention.
Mass A Treatise on Construction

New City is to be divided into three distinct sections, each section containing a unique set of characteristics that define its identity. These sections are separated by geographical lines, which create distinct boundaries for the city.

The separation of the city into three fields is significant, as each field becomes a socio-political entity. These fields are to be viewed as 'fields of action', with each field containing a distinct set of rules and regulations that govern its development.

The fields are divided by 'blocks', which are delineated by 'zones of expansion'. These zones allow for the expansion and contraction of the blocks, while maintaining a maximum 7:3 ratio of built to unbuilt space. Blocks can also expand into the 'zone of mitigated expansion' with permission from neighboring blocks.

A minimum line is maintained between neighboring blocks, which can be abolished if two or more blocks establish a political merger. However, blocks cannotmerge disparately, as an allegiance cannot be forged over a N/S block axis.

The rectangles represent the potential for fullest expansion of each block. The tapered edges form common land, exempt from the politics of the blocks.

New City is thus divided into 3 Fields (each of which contains a cut of N/S undulations). At this point, New City will begin to resemble field patterns (as fields within fields). These fields are to be deemed Fields of Action. They are shown in fig 7 and fig 8 and are also separated in fig 9 for clarity.

These three fields are immediately established as socio-political entities and become subject to the following spatial rules deemed 'The Politics of Unbuilding'.

The Politics of Unbuilding: Each 'block' or 'Field of Action', its origin being a circle, is its own political entity, delineated from its neighbor by a 'zone of expansion'. The block may expand and contract freely within this zone, maintaining a maximum 7:3 Built to Unbuilt Ratio. It may also grow into the 'Zone of Mitigated Expansion' with permission of the blocks bordering this linear zone. A minimum line is maintained between neighbors which can be abolished if two or more blocks establish a political merger. The 7:3 ratio, however, must still be maintained. Blocks, however, cannot merge disparately. An allegiance cannot be forged over a N/S block axis.
Establish points of 'Commons'. A progressive line of mounds is selected in depiction opposite. Refer to rubble plan opposite.

Zone of Action 1
Establish Plateaus on top of mounds using the 'rubble' stone from Non City using an English bond if desired.

Repeat for Zone of Action 2
Zone of Action 3


Bataille, Georges, *The Big Toe* (Essay)


Fuller, Buckminster, *Critical Path* (St. Martins Griffin, New York, 1978)

Foucault, Michel, *Other Spaces, Heterotopias Architecture /Mouvement/ Continuité,* 1984, October


Goethe, Ode 'To Nature'


