

A total rewriting of the past, present and future of design

No matter your relation to, or interests in design I hope I have something to say to you.

AN INTRODUCTION

I cannot assume that what I mean by design is the same as your understanding.

I discovered the importance of design nearly four decades ago. I found learning to design to be particular kind of learning to learn which liberated me from learning very little. I have spent my life trying to learn what design phenomenally is and how its agency operates on the world. My working life as a designer, theorist and educator has revolved around trying to bring others to gain a sense of **the significance of design at a fundamental level that its divisions of knowledge and practice conceal.**

Overwhelmingly, design is either trivialised or ignored. **Yes** as technique it has been instrumentally elevated and employed. **Yes** as a regime of aesthetics it has been projected, celebrated and inflated *but:*

- as world making, as the ongoing designing of the designed,
- as power, or for many powerlessness
- as elemental to the essence of our being (that is as part of what it is to be human), and
- as the primary path to the creation, or negation, of the ability to sustain,

design remains a complexity under recognised, explored, theorised and engaged.

Moreover, notwithstanding the economic application of design, the existence of design professions and the place of design in the academy, *design has hardly begun to be thought, critically examined, developed or educationally exploited.* I could ask, for instance:

1. Where does one go to learn how to think and engage design as an agency that prefigures cultural and material futures?
2. Where does one go to learn how to think and engage design as a central confrontation with ethical decision?

Unambiguously I am saying that there is a major disjuncture between the instrumental induction into the culture of design practice, with its modest theoretical and complimentary studies, and the kind of substantial education designers really need. Design education currently serves an economy based on making more of the same. ***It is currently unable to generate and lead sustainable change.***

Two contexts of constraints dominate: (i) **design as a service industry** — this undoubtedly will remain the zone of operation for many designers but needs to be countered by the formation of a dynamic culture of design innovation of sustainable difference. And, (ii) a continuation of **a restricted view of design by designers** — within which the dominant model of design history and theory are complicit.

This can be seen in the contained narrative account of design's significance in terms of individual designers, design movements, icon objects and images, notions of the evolution of form and of key moments. To either atomise design as a singular object of focus or to put it into a binary relation with a social or economic context is to de-relationise, and thus abstract what 'it' is. What begs to be understood is that design is never 'a-thing-in-itself' and never stasis, which means that it is always interconnected and active. This recognition leads to addressing two ever-present questions:

- how do I understand the relational connections of what I am viewing as design — where can I draw lines of intersection? And,
- what does what I am viewing as design animate — how and what does what is designed go on designing?

My criticism of most design history and theory is that it reifies design and thus makes asking these questions impossible. Effectively to de-relationalise design is to rupture it from its mode of actively being-in-the-world as world making or unmaking

The implication of what I have said are that the history of design tells us almost nothing about the historicity of design — which is to say that the gap between the historical narrative of design and the passage of what design is and has done over time is vast. And, that design history and theory are generally not aware of how, as discursive practices, they themselves are designed and design.

Specifically, these practices are not aware of their constructed position of observation, which itself constructs what is seen. Design is never simply just present to describe, it is always a projection, an ideality of an action of mind, a quality of some thing or process. To cast design as represented by the work of a specific designer, movement, producer or object evidences how it has been made to appear rather than what essentially it is. To say this, to accept it, does not imply we can instantly see design differently — such is the power of how the perception/reception of design has been designed. Rather one has to embark upon a process of learning out of which a new thinking and acting can emerge. The motivation to do this requires coming to a moment of recognition of just *how important design thought otherwise is*.

Against this backdrop it is possible to see why learning design becomes a life-long mission.

Before shifting ground there are the summary points to make:

1. Design is force, it is an imposition of direction, decision, an expression of human centredness — in fact, it objectifies what Nietzsche called ‘the will to power’. The performative consequence of the power of design in action is *either* an extension of world creation or of world destruction.
2. Once design is grasped as force, an appropriate point of entry to questions of ethical inquiry and engagement is disclosed.
3. We either create by accident or by design. So said, we need to remember that we humans are far better at bringing things into existence than we are at understanding what we have done. In fact, we seldom have a clear sense of the consequences of our actions.

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I regard adequately defining a problem to be axiomatic to working to create a solution. To say this runs counter to the long-in-the-tooth design education cliché that design ‘is a problem solving activity’ — the problem is not that this is not true but rather that the problem is usually given to the designer rather than being defined by him or her. For designing to be in a responsible act it has to be a problem defining activity, because as I have implied *everything we design and manufacture goes on designing*. Both designing and the designed are performative — I have already said, design is always directive of creation and destruction.

Let me give you two examples which open-into two realms of questioning.

One of the most powerful designed and designing instruments of the late-modern era has been the computer.

I put it to you that we have still a very limited comprehension of what it has created/is creating — do you grasp the designing force of the way it structures and mediates knowledge or the way it transforms of the nature of memory. Are you of age that can recall life prior to the computer or can you image life without it? Although in term of general use its only been around for 25 years it is if the world would become totally dysfunctional if the technology suddenly completely fail in a hyper-millennium beg kind-of way. What it illustrates, in linkage with other technologies, it that we have become just as dependent upon the artificial as upon the natural. How does the environmental movement deal with that?

I would also suggest we have even less idea of what the computer has destroyed, which is more a issue of mind (like: the nature memory) than it is of just matter (like: handwriting, the typewriter, typing pool, division of labour of office work).

OPENING STORIES: THE SPIRITS OF PROGRESS

Story 1. An account that would seem to be of little merit to design history

The Boeing Company assembly complex in Everett Washington is the largest structure ever built and a product of the industrial systems builder, the Austin Company. Like millions of other industrial plants in the world, it is the achievement of no-name engineers rather than big-name architects.¹ In summary:

- Site development work started in 1965.
- The building was designed for building 747s.
- It was built in a record 18 months, and measured on a scale of construction time per cubic feet, it is the fastest-built industrial structure in the world.
- It was around 2.5 million square feet before it expanded in 1978-79 to house the 767. The most recent addition, in 1991-93, was 1.9 million square feet for 777s, making the total area of the building some 5.6 million square feet which encloses approximately 440 million cubic feet of space.
- If you look down from the truss space you see eight 747s sitting side by side in one bay of the building. Two bays down there are eight 767s. And two bays down, again there are eight 777s.
- The building can function as a 24 a day, 7 day working week completely artificial environment — not a single window. It has fully filtered air at a low and fixed level of humidity and set at constant temperature
- If this building were to be disassembled and all the steel were to be loaded unto a train it would be 45 miles long.

In a few years, with the coming of the 700 - 1000 passenger super planes this building will be small potatoes. I would make but two linked observations of this building:

¹ Martin Grief *The New Industrial Landscape: The Story of the Austin Company* Main Street Press: New Jersey, 1978, and Website www.the.austin.com/html/body/_ra-melsop.htm — the account of Austin draws heavily on this material.

- as a completely designed environment it functions with the force of the law of artificial nature and is a form of a coming future
- as a 24 hour building it represents what is going to become a far more familiar form. Two forces are designing this form: the 24 operative economy of globalisation (a constant exchange of knowledge, product and money — this is how a company like IBM now functions), and the neglect of greenhouse gas emissions reduction (which means an ever growing division between stable and unstable environments, security and risk, and cause and effect).

Story 2: On the spaceship ‘Spirit of Progress’

This story is told to make one simple and stark point.

This mega-world spaceship was launched from a planet we are familiar with over 500 years ago. Its aim was to carry the population of an endangered planet to a secure future where everyone had a good life. After centuries of travel the ‘crew family’ started to realise the ships engines were running down and its guidance system had a fundamental flaw. The ship was in fact on an uncorrectable arc back to very place it had been launched from. So rather than transporting everyone to a secure future the spaceship was en route to a catastrophic crash landing. The crew decided that if they told the truth to all passengers on board who were on holiday from their cryogenic rest berths would riot, and anyway most were having too much of a good time to bother to listen to doomsayers, and anyway such was the power of the dream drug that filled their waking and sleeping minds bad news could just not be heard.

Commentary: Refusing to know the known is our problem. People know that we cannot sustain the way we live, destroy resources and biodiversity, pollute environments and waste so much of material and cultural value.

Two problems of human dwelling converge: our numbers, our impacts and inequity.

- the world population has grown, and grows, at an alarming rate (from 1.6 to 6.00 billion in a century), yet this is not the key problem, for, on average, the impact of one person now is at least 50 times more than one person a century ago. Population and impact always have to be viewed together.
- excesses of wealth and the insufficiency of poverty are both destructive — the one squanders, the other has no ability to replenish what is taken. In this context confronting questions of a sustainable standard of living equates with issues of social and economic justice.

There is a crisis, but not one that is absolutely materially determined or fatalistically destined. Rather, there is a crisis because direction and critical conditions are being refused. We humans, we anthropocentric beings, suffer under three states of restricted vision: (i) we find it extremely difficult to lift our eyes from whatever, myopically, preoccupies our short-term interests; (ii) when we do lift our eyes, it is often just to focus on the object of our dreams; and (iii) what we see is limited by what we know, we in fact only see what we know (or as Plato explained, we see with our minds not our eyes, which are mere optical instruments).

Currently, although immersed in it, we just do not see the unsustainable; we do not see where we are going, what we are doing. Unease does arrive from time-to-time, but for the majority this is placated by the hope or expectation that a technology will arrive to fix the problem. I do not share such a disposition.

Technology and design are at best ambiguous. Yes they do have to be part of the solution, but equally they are a big part of the problem. **From my knowledge and practice, understanding how design and technology have taken futures away and how they can be redirected towards making things otherwise is the essence of the project of sustainability.**

I am both overwhelmed and excited by this task. I am depressed because there are still so few people working on it meaningfully; I am optimistic because its agenda is unavoidable. As far as us humans are concerned, for there to be a world for us the world of our making has to significantly change. This is not a matter of tinkering around with ‘green design’ and few ecodesigned products and the odd ‘sustainable building’. Rather it is a project of greater weight and possible duration to that of the Enlightenment, but with higher stakes (because everything is at stake). It is project in which design remade and the creation of sustainable cultural futures, has to have an enormous role. I see a ‘total rewriting of the past, present and future of design’ as a critical contribution to the remaking of design.

A TOTAL REWRITING: three moments of my own realisation

Moment one was a slow recognition of design having a great deal more to tell than histories and theories of design speak — this understanding, gained over a decade or more, was put forward in a series of ten public lectures at the University of Technology in Sydney in 1997.

Moment two arrived as the naming of this other way of telling the history as defuturing — this was presented as a reworking of the lectures in a book, a *New Design Philosophy: An Introduction to Defuturing* published in 1999.² The essence of this moment being that in order to learn how to take responsibility for the futures we create by design, we have to learn how to read how historically design takes futures away.

Moment three is now. It is a moment wherein the implication of what has been learnt is still being sought to be communicated while, at the same time, I myself am still coming to terms with what has been disclosed by inquiry and the need to make design other than it is. It’s hard.

DESIGN OTHERWISE: PART 1.

Now I am going to try to show you a few other ways of thinking about design that have the potential of significantly alter the ways we think, view, undertake and employ design.

In one direction the attainment of western design, engineering and architecture are celebrated and elevated, who could not be impressed by attainments of people like Gustav Eiffel, Isambard Kingdom Brunel, Henry Maudslay, Joseph Paxton, Thomas Edison, Louis Sullivan, Eli Whitney.

Yet, as I have been saying, behind this history is a vast untelling of the cost of destruction of the making of the modern world, the other designing, and the defutured.

To add further to an acknowledgement of this untelling there is another untold story — the story of an other designing of an other culture.

Design has become taken to be, like technology, a universal concept. However, the power to design, and the authority to say what it is and means is not universal. A commonality of meaning does not exist in a single culture, in a single setting. We in fact communicate design by misunderstanding.

² Tony Fry a *New Design Philosophy: An Introduction to Defuturing* Sydney: UNSW Press, 1999

China displayed a certain facility to comprehend the designed nature of things well over three thousand years ago. The Chinese recognised that things exercised propensity towards the world. Which meant they performatively inscribed their presence, occupied a place of being and animated it. The designed object was always performative (and not just when being used functionally). It predetermined a way of seeing, which prefigured what was seen, which in turn was directive of action of being with. Such thinking, rather than just being ancient is also in advance of the present. What we have is the instrumentalised version of this, like the theme restaurant, the retro-car, and corporate-identity.

We generally do not acknowledge, and respect, there are 'other' senses of design, which simply cannot be translated into the frame of reference of design as we know and name it.

The view of design we are introduced to, usually at an early age, is dominantly concerned with the form, aesthetic qualities and function of things. Yet this mode of 'seeing' the designed powerfully determined long before the formal 'idea' of design arrives. This is because to acquire a language is also to acquire a cultural worldview and thereby inherit a *designing* mode of categorisation. The pre-determination of our mind-set, language and disposition means that we are generally unable to structure 'the order things' of the world in a radically different ways to allow for *other relations to be both recognised and made* — that is *unless* we make a considerable effort to alter our cultural framework, or are intimately exposed another culture. As Lothar Ledderose has argued in the case of mostly pre-modern Chinese culture, the modularity of an assembler system of script converged with other systems of modular construction (e.g., art, buildings, ceramic products, armies, ceremonial artefacts) that established sets of structural relations that just cannot be seen via an atomised perception of 'things' or by unification as 'style'.³ Underpinning this notion of 'design' was of course a system of categorisation with designing force that was just not predicated upon the western binary thought. For instance, rather than placing design with the realm of the artificial, posed as the opposite to the natural, Confucianism could view both nature as a construct and design as a means to create the natural.

To make my case more specific I will touch on a cross-cultural comparative history of a particular material: steel (alloy of iron and carbon). This history enfolds several figures of difference: An eastern versus a western view, the negation of materials in the history of design and incommensurate notions of design.

The dominant history of iron and steel pays passing reference to manufacture in the ancient worlds.

The historical narrative variably claims that iron was being made from between 3,500 — 5,000 years ago in the near and far east. Iron first arrived in the west about 3,000 years ago and, over a period 1,000 years, iron and steel making spread into southern, western and northern Europe via the Assyrian, Persian and Greek Empires, the Celts and then Roman Empire who, from the -1st century, travelled with the *fabricate*, craft guild armours who set up forges in Garrison towns to support Roman legions and engineers.

The conventional history then notes that metallurgical sciences figured among those knowledges neglected in the Dark Age. Although a good deal of iron was made in crude bloomery furnaces to produce the weapons and horseshoes for the crusades between the 10th-12th centuries there was no real advance in the science until a reawakening of learning in the 16th century. From a modern perspective, the literature on the topic commences with Italian metallurgist Vannoccio Biringuccio's *Pirotechnic* of 1540 followed by the German scholar Georgius Agricola's *De Re Metallica* of 1556. From this point an evolutionary story leading to and beyond the industrial revolution unfolds.

There are two and connected major structural oversights in this history.

³ Lothar Ledderose *Ten Thousand Things: Module and Mass Production in Chinese Art* Princeton: Princeton University Press, 2000.

First, while there is some acknowledgement of the metallurgical knowledge having been lost, the actual significance of the quality and quantity just does not get recognised.⁴ Second, much, which is taken to be of the character and attainment of the industrial revolution, was in fact prefigured by the mode of operation of ancient world industry. Thus, any notion of the technology following a continuous evolutionary path is complete a fiction.

To support this claim we can turn, for instance, to consider accounts by Joseph Needham and Donald Wagner, who tell us in detail that China was the world's largest and most efficient maker of iron between about the -4th century to 1700.⁵ They point out that the blast furnace was in use in China from the -5th century, and that high quality crucible steel was manufactured from the -3rd century — this with coal as the fuel and charcoal as the carbon source in the reduction process. Viewed from the west, these developments were around 2000 years before the blast furnace was 'invented', or before coal became a viable fuel, or before Benjamin Huntsman discovered the crucible steel making process in 1740.

Moreover, many of the notions that underpin the rise of the industrial revolution are thrown into question by this history — for instance, Needham cites *Cho Shih*, an ironmaster of Szechuan who by the 3rd century had an ironworks that employed nearly 2000 men.⁶ He also points out that what regulated material supply was not the output capability of the technology (as was the case in the west), but market demand.⁷ In this period, large structures made of iron were manufactured, like iron bridges and pagodas. Likewise, building products, such as cast iron roof tiles, iron chain and plaques were all made in volume. However, the iron products which had the most significant impact on Chinese society were agricultural tools, especially ploughshares, which dramatically transformed food production and the use of iron and steel weapons which gave its armies an enormous tactical advantage over adversaries still using bronze weapons.

A similar comparative history is seen when we shift focus to environmental issues.

Although environmental management might be thought of as a recent introduction in the recognition of current environmental problems this is not the case. As again Chinese history illustrates. Records exist indicating that forests were being cleared for agriculture in China at least 6000 years ago. Deforestation was being recognised as a problem a thousand years after this. At the same time this was a culture in which the tree was becoming a key 'ecological indicator' — it was the guide to the 'the Tao of the earth' — the health of the tree could be deemed to reflect the health of everything from the condition of local soil to the life of the planet as a whole.

As civil society was formed under imperial rule in China resource management became an increasingly important domain for the sophisticated imperial administrative systems that constituted the fragmentary proto-nation. We thus find that by the -1st century Superintendents of Mountains and Marshes, Inspectors of Forests and Rivers, and Controllers of Charcoal were being appointed. The Inspectors of Forests and Rivers decided which trees of which species could be cut and when. The demand for timber from the construction industry, due the rapid growth of cities, was a major problem. To redress this situation, by the 11th century Pine plantations were being planted. The ten volume instructional work on

⁴ Metallurgy occupies a strange place that threads between and eternally joins magic, alchemy and science. The preoccupation with finding a wonder material, the turning of one material into another, the ownership of secret knowledge present at the birth of magic, was constitutive of alchemy flowed into science, is alive in the present and is accommodated by reason. Founding figures of science, like Robert Boyle and Isaac Newton both had other lives as alchemists. Contemporary metallurgists are just as intent on a creating materials that defy scientific laws — the attempt to manufacture 'glass' in Japan is current super steel project.

⁵ Joseph Needham *The Development of Iron and Steel Technologies in China: Second Biennial Dickinson Memorial Lecture*, London: Newcomen Society, 1956 and Donald B Wagner *The traditional Chinese iron industry and its modern fate* Copenhagen: Nordic Institute of Asian studies, 1997.

⁶ Joseph Needham *The Development of Iron and Steel Technologies in China* p.7.

⁷ *Ibid*, p.20.

tree planting and cultivation written by *Chhen Chu* at this time — it is now regarded as comprehensive as a modern publication.⁸

In contrast let's look at an example of the western scenario — deforestation in England.

This was first formally acknowledged in the 16th century.

Such was the problem that acts of Parliament were being passed to curb the level of destruction of forests. The first of these was passed in 1558 (the year Elizabeth 1 came to the throne); it directed that timber should not be felled 'to make coals for burning iron'. It stated that 'no timber, of breadth of one foot square at the stub, and growing within fourteen miles of the sea, or of any part of the rivers Thames, Severn, or any river, creek, or stream, by the which carriage is commonly used by boat, or other vessel, to any part of the sea, shall be converted to coal, or fuel, for the making of iron'.⁹ Other acts followed in 1581 and 1585. By 1630 deforestation had spread from the west of England, the Weald and Southern counties to as far North as Durham.¹⁰ Over the next forty years the demand for timber to make charcoal was so great that supply fell and the production of iron dropped. This situation equates to a vast destruction of England's forests. A seeming solution to the problem arrived in Europe in 1709 when Abraham Darby perfected the smelting of iron with coke at his Coalbrookdale Ironworks.¹¹

These outlined events invite being recast. Initially by what has been learnt about fossil fuel, greenhouse gas emissions and global warming in the last few decades. England's deforestation, and the rise of its use of fossil fuels, now reads as part of the early history of contemporary environmental problems. On this count it is worth making two observations. First, CO₂ is the greenhouse gas with the longest atmospheric life — this can be over two hundred years (the accumulation of CO₂ that produces global warming that reaches back into the industrial revolution). Second, the history just registered falls within a dominant western model. The smelting of iron with coke is frequently employed as part of the narrative of western technological progress. This is incorrect; in fact from other readings it actually evidences technical and environmental backwardness.

These passing observations are but to indicate that when we work with the dominant discourse of design we labour at the edge of enormous zones of exclusions. To stray into these zones is to start to realise that there are other significant histories of technology, design, the unsustainable and sustainments to be engaged and understood. One also realises more overtly that other non-western cultures have brought other things/environments/values/meanings into existence on quite different terms than those we are familiar with. These others have in fact made quite other worlds — worlds that are developmentally very different from those we know and we see still being universalised. The silence of these worlds affirms that history as told, including the history of design, is deeply implicated in the ethnocidal violence of cultural modernity and the inability to translate much of what seems to have already been culturally appropriated.

The unspoken underpinning the western story of progress is uncomfortably close to the racism of social and economic Darwinism (the increasing tendency to simplistically divide society into winners and losers is the afterlife of this thinking).

⁸ See Nicholas Menzies in Joseph Needham *Science and Civilisation in China* Vol6, Part 3, Forestry Cambridge: Cambridge University Press, 1996, p611.

⁹ Harry Scrivenor *History of The Iron Trade* London: Longman, Brown, Green and Longmen, 1854, p.35.

¹⁰ Howard G. Roepke *Movements of the British Iron and Steel Industry — 1720-1951* Urbana: University of Illinois Press, 1956, p.4. This picture of events has been subject to valid criticism in that it fails to acknowledge the complexity of a situation wherein labour costs, skills, available water power, imports, transport cost were all factors. Notwithstanding this, and while economic impacts are contestable, the environmental picture remains in tact and grim.

¹¹ *Ibid.* p.5.

The colonialist notions of the other as backward and unable to develop, were historically long standing and ran well into the 20th century. Conversely, the notion that 'development' displaced what a culture had already developed did just not arrive. Neither did the idea that what existed 'for the other' may well have had qualities that were valuable to conserve and superior to what has recently arrived. **One minor** but graphic **example** of this was the rejection of the musket in 16th century Japan, because it threatened the future of the samurai tradition.

We still struggle to comprehend that many things from other cultures were/are socio-culturally and environmentally in advance of the evolutionary fictions that accompanied the grand narratives of progress, technology and design.

What is really being said is that alongside the not insignificant history of design, **as told, is a historicity of narrative erasure**. This is in the erased story of the exclusion of the other; the story of design as an *unmaking* of what was, and thus what has been diminished by a particular view of design. But then, even within the dominant history of design, there is another historicity of erasure. This of the unmaking of the way design was made an instrumental, rather than a reflective practice. At its simplest this meant the making of a practice preoccupied with the question of 'how and what to design', rather than questions of 'why design'.

DESIGN OTHERWISE PART 2

Some of the methodological and conceptual pointers to the reconstruction of the past and present of the history of design have been indicated. Much has been left for comment later and elsewhere. Our aim now is just to acknowledge how design theory and history can serve the sustainment of the 'the future'. To do this requires finding a way to dispose our selves toward technology.

On technology

The ways most of us were introduced to the story of the relation between humans and technology was that at some point in the development of the species someone picked up a stone and employed it as a tool, which then initiated the activity of the 'evolution' of tool making. This developmental path eventually led to the rise of industrial crafts and then to those fully-fledged technologies that manufactured the modern world. This account is the orthodox telling of the passage from *homo-fabrica* to *homo-economicus*. However, this narrative is open to serious challenge once one grasps that, ontologically, that which is the designed realised by the tool, and prefigured by intent, always acts back upon its agent (design learning) as well as forward to deliver an object in the world that itself goes on designing (as a functioning agent and as a referent for future designing). The implication of this observation is that human being is, by design, as much a product of technological design as its user. Again this view contrasts with another long-time told explanation, which many of us were culturally inducted into, this being that technology was a tool created by 'man' to extend 'his' power and, by degree, to command or placate 'nature'. This presentation of technology established a 'common sense' view, which asserts technology as directed by us (**and is other than both us and nature**), is both knowable and continually evolving.

Technology so understood as structural, as 'naturalised', begs serious questioning as the primary force of designing now.

In Conclusion: wither now humanity

Western productivist thought, as constituted in Greek classical thought, defined the world as being constituted from structurally elemental and divisible parts. Conceptually these parts were viewed as able to be manipulated. Geometry and atomic theory were, for instance, the product of this moment. The concept travelled in time and became materially realised in the rise of practical science in the Enlightenment, the emergence of early industrial technologies and in the rise modern physics and technology. I was continuously articulated by design. Treating the world as a structure of

elemental parts from which to produce other structure has brought us to where we are now (and to where we can now no longer go). Instrumentally we are great achievers, inventors, technicians, and builders. Yet we fail the labour of mind, which, as said, Plato told us is the means (if not the instrument) by which we see.

One can say of design that we mostly design blind — we realise products and cannot see process, causality, and consequence. *We just do not see.*

Design history and theory have not been realised to be means to see where we have been, where we are, where we could go. They could — we desperately need such a third eye, a third point of reference. Without this means to see and orientate, we cannot contest the nature of design in order to make another future, in order to intervene as woken sleepers from ‘the spirit of progress’.

Finally, while I have registered the defutured I have said nothing on the deep structure of unsustainability in which we live. Nevertheless, from previous experience, I would suspect some would think I have been negative. I am not, unless you think looking an enormous problem in the eye and having the arrogance to think you can help do something about it is negative.

Technology postscript

First we need to register the disjuncture between the way we imag(in)e technology and phenomena itself. The indistinct division between ‘it’ and ‘us’ has already been acknowledged in the formative moment of our coming into being — looking back, technology fused a creation of, and induction into, the world and the production of a self. Looking forward — technology, as it moved from just being the product of artifice, calculation, information, knowledge and immaterialised, became elemental to the making of mind as well as formative of worlds, actions and ‘the nature’ of selves. Although lines of demarcation, for example, between matter/mind, fact/fiction, biology/technology and nature/nurture are ever disappearing public perception and discourse continues to function with and impose simplistic binaries.¹² This situation is itself symptomatic of a wider and continual breakdown of systems of representation. While this is implicated in a long-standing philosophical discussion on the relation between ‘reality’ and ‘appearances of real’ what is more prosaically evident is that ‘communication’ occurs in a growing condition of misunderstanding. The very word ‘technology’ falls into this mire — it gets assumed and used as a commonly understood concept, but is really a word of deception. One use of the term does not necessarily equate with another, and, whatever technology is, it does not remain constant — technology continually transmogrifies (rather than evolves).

We humans cannot get on the outside of this problem of sensing/seeing/knowing — we are not external, there is no objective point of observation to occupy.

Second, and linked to the previous point, that nothing is now untouched by technology is take to a *factum*. Alterations to land and sea by the application of technology to mining, agriculture and fishing, the ecological damage resulting from the deliberate and accidental release of toxins, nutrients and other chemicals into the environment, the destruction of forests by machines, the alteration of water courses by aim or error, the use of instruments of war, the arrival of genetic manipulation, the intended and unintended destruction of some plant and animal species and the modification of others, the unwitting modification of the climate by human activities — such listing invites almost endless elaboration of this ‘everyday’ actuality that we humans are on the inside of.

¹² The relation between nanotechnology, biology and electronics, which will deliver organically grown microchips, is one good example of this.

Technology is elemental to our world, may well be implicated in our being (we wear spectacles, have fillings in our teeth, have body parts surgically removed, repaired or replaced or are fitted with prosthetic limbs). Even more pervasively, it prefigured us and our worlds — for instance, the ultrasound image and associated electronic monitoring data arrives in the world prior to bodily entry and, in some cases (via in-vitro fertilisation), technology is directly present at that moment immediate prior to conception. Likewise, and in a literal sense, our very ability to recognise and see ‘the world/worlds’ has been formed televisually. The very imaginary of planet earth, now so familiar to the population at large, is dramatically different post the arrival of projected images from space and from terrestrial telefilmic. Pictures of the multitudes of environments, places, peoples and lifeforms around the planet always exceed our direct experience. They constantly populate our memory.

The consequence of the way we technologically come into knowing equals losses as well as gains. In a world of perpetually technologically mediated experience a good deal of wonder is lost — the directly experience has so often already arrived as image. As a result the nature of proximity has changed — the ‘global village’ constantly bring things near, while not becoming close. This seemingly innocuous, if slightly cryptic, observation on the televisual points to profound consequences on how we see, think, dream and desire. The mediated worldview that constructed, and is retained in, our televisual memory is a massive force of designing. To a great degree it now prefigures what it is we want to be, where we want to go, what we look like, how we speak, how we live, how we conduct ourselves sexually, what we talk about, what we know and think. This technology of dreams has had profound individual impacts but also global ones — no other medium has been such a powerful mechanism of globalisation: it took the ‘world of consumer goods’ to ‘the world population at large’.

The accumulative layers of technology that have created, and rest below the surface of the televisual (the ability to generate and distribute electricity, to transmit sound and image, to receive sound and image and so on), evidences an enormous amplification of human ‘world shaping’ power, both materialy, and culturally. Equally it also exposes the powerlessness of humans to control, and take responsibly for, the consequences of their actions. Nothing contributed more to the growth of unsustainable impacts than the televisual’s ability to image and sell commodity-saturated futures. Nothing has done more to reduce every thing to entertainment. Putting these two negations together allows one to say that — nothing has done more to image the problems of the unsustainable than the televisual, but nothing has done more to make the problems harder to engage. To take just four examples of this:

The spectacle dislocates — the way television presents problems of the unsustainable are in the main ‘naturalistic’ and symptomatic. For instance, the problem of the destruction of rainforests is reported in terms of land clearing, the timber industry, the greenhouse issue, the loss of the lungs of the earth and best of all tree-huggers versus forest workers jobs. All of this is image rich — beautiful trees, wild protesters, and big trucks, stunning landscape. It makes ‘good television’; it is entertaining and very visual. However, what is driving the problem, what really needs to be grasped are the demand generators — the economy of paper products, paper hungry office technology, printing presses, plus other industries, like building and construction. Additionally, there are the failings of political imaginations that cannot see other economic options nor draft strong legislation. The issue then is not just about natural systems but rather complex political, social, economic and environmental issues as they inter-relate to each other — spectacular images conceal as much as reveal what needs to be known. The problem to understand is never reducible to either a spectacle or a few issues; rather, it is a relational set of factors that exist in a field of forces. Televisual time, and the ability of the medium to compress complexity, while appearing to simplify and visualise the problem in fact abstracts it. The contextual over determinations of the televisual, its drive to entertain and to be programmed competitively, always displaces the serious to the margins and thereby strands informed and motivated audiences