'on matter'

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doors of perception

How can faster information help us to **de-materialise products** and services and **slow down** our consumption of matter and energy?

John Thackara reviews the 'Doors' projects and outlines Doors of Perception 3 (held in November 1995).

Where specialists are working together to **synthesize** the cultural impact of technology and the design challenge of **interactivity**.

It is easy to forget how wide a gulf separates thinking and doing when it comes to the environment. For 30 years now, scientists, think-tanks, governments and global organisations have all been measuring and analysing the 'eco' problem. Naturally, given the extent of the problem, they've produced a stream of ghastly projections. As a result, eco-gloom is now a dark cloud in all our skies. But do we change our behaviour? Or do we simply take the attitude that if it rains, it rains; if the world ends, it ends.

Compared to such eco-gloom, everything in the info-garden seems endlessly bright and sunny. The indicators leap effortlessly upwards—tens of millions will soon be 'connected' and the information economy will grow exponentially forever. There's just one small problem—even the plugged-in will fry if the planet crashes.

Global denial of such a scale is a terrible frustration for environmental policy makers, but they lack the *tools* and *understanding* to confront it. Let me repeat that environmental policy makers are lacking the tools and the consequent understanding with which to confront the problem. Policy is worthless until millions of people act and change the way they live in myriad small ways, but there's no sign of this happening fast enough or deep enough.

The experts talk about the 'Factor 20 Scenario' which basically means that we all require a radical decrease in our absolute consumption of matter and energy, within a single generation, if we are to achieve a sustainable world. This can only be achieved if a cultural shift of great magnitude takes place. No amount of legislation and no technological fix is going to save us. Factor 20 de-materialisation will only be achieved by intense, bottom-up economic and cultural creativity stimulated by, but not relying on, new technologies and involving a dynamic collaboration between businesses, experts and the creative input of untold individuals.

So where on earth does anyone start? Not by re-designing the whole planet and its meta-systems in the abstract. Practical, technologically-informed strategies are what the *Doors of Perception* Conferences have been about. *Doors of Perception* is not about global summits and grand plans to save the planet, but about planting tiny seeds that, who knows, may produce one or two of the millions of answers we need to find. Our theme in 1995—matter—reflects the shared interest of both 'info' and 'eco' communities in speeding up the flow of information in order to de-materialise activities that will otherwise devastate the planet's resources.

To identify the things that need fixing, we at *Doors* use a process called back-casting

in which a scenario or picture is made of everyday life in a world which has achieved a Factor 20 balance. For example, we work from a scenario that 90% of food is eaten within 50 kilometres of where it is produced. The workshops take such ideas and turn them into stories that describe how life is organised in this contemporary situation. Designers play an important role, using their planning skills to make the story coherent, and their presentation skills to make it look persuasive. Thinking and then, necessarily, doing.

This process must not simply be an academic forum or a theoretical discussion; we can make a difference to what happens over the next five to ten years. For the first time in human history, we are introducing a technology into society in such a way that we can think first about its uses and effects. At no other time in history, be it our invention of the wheel or the campfire or of writing on cave walls, could we do this; technologies basically happened to us, or they came along in some ineffable way. Digital technologies have been around for a couple of decades, it's true, but we are all now able to think about what technology is 'for'. The consequences of this alone will be interesting.

I should explain briefly why a design institute should be involved in all of this. Along with a lot of other people, the Dutch decided that the era of large centres, universities or design councils telling the rest of the world what to do on the subject of design was not a good model for the new economy. So, for the last ten years, they've been setting up centres of expertise—very small, light, flexible connection-intended organisations, of which the Netherlands Design Institute is just one example. When we started work, just over two years ago, on thinking about the program for a brand new design institute, our first and obvious task was to look at the world and ask, 'What is happening, what is coming towards us that we need to be thinking about?' And the obvious thing at that moment in 1993 was the multimedia highways of the mind—the Infobahn. We decided to ask a different set of questions out of sheer curiosity: What is it for? What are highways of the mind for?

Where do you go on them? And this is where the whole subject of content began to be part of the debate. For the last three or four years or so there's been a debate between the technologists and the infrastructure people about, on the one hand, pipes down which you can send gigantic amounts of information, and, on the other hand, people asking what is going to come out of the end of these pipes. (One of Hewlett Packard's corporate advertisements featured a tap and a little drop of water coming out of the tap with the headline—*Are you worried that you're not getting enough information?* To me and to most people with whom I spoke, the image of a tap which you could turn off was very seductive. This is very obviously the opposite of what they intended.)

These initial questions led to the first *Doors of Perception* conference in November 1993. Six hundred and sixty people from thirty countries came to Amsterdam, at very little notice–not because we promised to tell them about the amazing new toys (this was no trade event, there were no public demonstrations), but because we asked, 'What is this stuff for?' The question obviously touched a chord with people who weren't sure where the hype was leading.

And so the second year, having asked the question about what all this technology was 'for', we decided that we needed to know 'What does it mean?' It seemed to us that in talking about the impact of this family of technologies on our lives, the telecommunications companies and the media giants and the computer multi-national companies had not made a very convincing case about its purpose (beyond rather abstract references to video on demand, tele-shopping and in some cases virtual sex which were surely banalities, given that we were talking about an economy of some hundred or two hundred billion dollars per year). What we have learnt from the history of previous technologies is that you actually don't know what the consequences will be when these are introduced into society. So we thought we would ask a question about that at our

second event in November 1994, called *Doors of Perception @home*. Some thirty speakers asked, over three days, not how easy it is to get video on demand or how to pay for jewellery over QC, but the important question about the result of this technology on the home, as a place, as an idea, as a social idea, and as a cultural element in the community. This question too must have been interesting to many people: eleven hundred people turned up to sit for three days in an unbelievably un-interactive way; two hundred and thirty-three journalists came too (the media had also shown great interest in our first conference) and all because we asked a question about what this stuff means.

Having stimulated all this excitement for ourselves as well as for the audience and the media, we were left feeling very, very dissatisfied that we'd actually asked questions and not been able to answer them. The most important and basic question is surely about the point at which information ceases to be data and becomes socially, culturally or economically useful. This question arose again and again—the concept of *vital* information, the idea that we want something which is viscerally connected to our lives, to our relationships, to where we live, to where we work. That is the point where information is valuable, or potentially valuable. Everything else has no value at all. By failing to connect this infrastructure of information technology and raw information itself to things that were valuable to us as people (in our homes and in our work and amongst our families and community), we were being complicit in the hype of spreading information without value through an unsuspecting populace.

Crucially, however, at the same time as many were talking about information technology as a wave, many others were talking about the most fundamental question of all—What was going to happen to everyone and everything we value if the planet is destroyed by our consumption of matter and energy?.

Scare mongering is a useless exercise. I'm a *late* Green person. I've become sensitised at a very late stage. I'm not one of the

people who studied environmental developments and debates over the last twenty or thirty years. But when we, at the Netherlands Design Institute in Amsterdam, considered what we should be doing about an 'eco' design, we discovered that, as far as ecological relevance goes, a large amount of attention was being paid to 'end of pipe' work—industrial processes of one sort or another, ranging from aviation through to the packaging of baked beans, and seeing how to minimise the impact of those processes on the environment. Chris Ryan and his colleagues at the Key Centre for Design at RMIT (and other centres around the world) have been going upstream in trying to make things more recyclable, less damaging to the environment, consume less energy and so on. But the bottom line of this whole body of work, as these experts have discovered, is that if one draws a line from now into the future, and if you multiply a

driving around on unnecessary car journeys, made most industrial products recyclable, etcetera, we might make our overall collective performance four times better, maybe five. *We need to make it twenty times better.*

We're talking about a quantitative jump which implies a change in the way that we live, in the way that we organise our presence on the planet which is much more than the sum total of lots of little improvements. At the moment, given that even the type of improvements I just described are ideal ones but certainly not yet actual, we are currently achieving a factor of improvement of less than zero; things are still getting worse. But supposing, with awareness growing, with all sorts of complicated factors taken into account, we start to improve things over the next five years and get above zero. If you consider that the graphs give us forty or fifty years,

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number of factors together—living standards, demographic material, energy consumption and their impact on the biosphere, on energy, on matter—there comes a crunch, a point in the future of no ecological return. The experts, ranging from the Club of Rome, the UN to various universities, have come to the conclusion that we've got forty to fifty years.

In order to achieve sustainability (which is the capacity of the planet to support the people in their greater numbers, their living standards and the processes and the infrastructures and the systems that support us all), we have to improve our efficiency by a factor of twenty. *Factor 20*. The most optimistic projections about 'end of pipe' work to make things better is that we achieve Factor 3 to 4. Maybe if everyone in the world re-designed their factories, centrally insulated their houses, stopped

there is a point at which incremental changes are not going to be enough; we have to make a jump.

There are two simple things that will achieve or characterise that intention. One is de-materialisation. The development of 'anti-matter' is a basic goal; the problem can't be solved just by making cars more efficient or making our products less harmful to the environment. The solution lies in making the concept of anti-matter or de-materialised services the fundamental concept informing the way we live. This will be achieved by the speeding up of information and the slowing down of matter. These are the two 'big' ideas for us all to consider.

How to achieve these ends is the big question. The basic problem is that until now, eco-environmental experts, think tanks, government agencies, international

bodies, the UN—the policy world, in short—can only analyse in various ways how bad things are, and what they do is publish, with more or less fanfare, ghastly scenarios such as Factor 20. The world of policy making, the world of big entities and the world of governments are locked into a cycle of behaviour in which they're not actually responsible for what happens to their policies once they're issued. We think that governments exist to govern, but actually governments exist only to be governments. International bodies too, tend to exist only to be themselves. So when by great feats of very, very brilliant scholarship and science and research, they produce documents which demonstrate that we have to get to a Factor 20, they publish multiple documents and then their job is done. The whole cycle is unfortunately based on 'top down', on putting information into society and hoping for the best. It is now understood, for instance, that the whole profitability of the

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western economy has been in crisis over the last twenty or thirty years, precisely because of this failure to actually enact knowledge in society. But it is also better understood now that innovation is a social, and not just a technical or a 'top down' activity. Millions of experts and think tanks around the world now understand that putting information into society, by itself, is not sufficient to make society act upon it.

In the heartland of capitalism, where hostility to government edicts and 'top down' activity/strategy is actually at its most visceral and virulent, a new kind of attitude towards how you manage or stimulate innovation has emerged—one doesn't set up a polarisation between strategic information and activity; you engage business, the communities, the cities, the regions—all the small active units that denote the 'bottom up' bit in a common endeavour. The ecologisation of commerce, the turning of business into a partner in the eco fight, is fundamental and an important

expression of vitalising bottom up activity.

And so, Doors 3, the title of which is On Matter is further described as a 'meeting between info and eco communities'. The November (1995) event is concerned with questions such as, how might information technology and design help us live more lightly on the planet? How can faster information help us de-materialise products and services and slow down our consumption of matter and energy? On Matter is about the interaction of big stories, spectacular new technologies, and small actions to exploit them. The organisers of Doors of Perception 3 include pioneers in the use of the Internet, World Wide Web, videoconferencing, MOOs and other media environments which have the capacity to engage individuals around the world.

The provocation of 'thinking' is certainly our intention, but so is the provocation of 'doing'. Let's consider the concept of 'collective intelligence'. Information

technology is delivering powerful new tools which make it possible for people to communicate with each other via machines, not just one to one, but also many to many. So, how real is the prospect that these tools will foster the collective intelligence, and not just the exchange of data, that we will need to achieve a sustainable future? One seminar will look at 'the mental and the material'. What is the specificity of the human race within nature? In designing information networks bigger than ourselves, have we made ourselves blind to the vital signs that tell us about the health of the planet? Have we forgotten the fact that human intelligence is bound up with having a body, and that our bodies can only exist as part of a planetary eco-system? Another session called 'info-eco communities' will look at organisational and social issues. Intense social creativity will be needed to achieve sustainable lifestyles, and much of that creativity will necessarily be taking place

at the level of 'the community'. But what is a 'community', and to what extent can information technology stimulate collective action among people living in different places? What can we learn from our lived experience of family and kinship relationships that can enrich new communities within communications networks?

Workshops have a different role—to make new ideas visible, and to expose participants to new ways of working together. At Doors 3, workshops will focus on real enterprises at the leading edge of business; others will develop new product and service concepts, system and process designs. Each group will include subject experts, a moderator, a visualiser and a rapporteur and each workshop will be asked to present its findings in the form of storyboards and an iconic object.

The first group of workshops will focus on aspects of 'Feedback'. We tend to be confronted, in our actions for the health of the planet, with a de-motivating combination of moral hectoring and abstract information. How might a combination of computer graphic simulations and immersive media enhance our understanding of complex natural processes? How might information technologies refocus our attention on our bodies and on the earth? And in particular, how might scientists work in collaboration with designers and communications experts to deliver this information in such a way that we can relate to it personally? Apply the example of existing mapping systems such as GIS to complex global processes. Many powerful simulations already run in laboratories; how might these be projected into society? The workshop will bring together social and scientific historians, psychologists expert on feedback and attitudinal change, designers and artists, and experts from the front-line of remote-sensing, GIS and related computer simulations.

A second group of workshops is called 'Caring For Matter'. The ecological vision emphasises the material presence of the planet itself; ubiquitous information creates a sense of immateriality and rootlessness. How might we use new information and

communication tools to enhance our sense of, and responsibility for, matter and place? One workshop in this group will be considering ecotourism. The damaging impact of mass tourism is made worse by the tendency of modern travel to desensitise us to nature and culture; we move vacuously from duty-free to resort, to beach, always blind to the damage we may be causing. How might information technology enhance the concept of ecotourism? Another issue is the use of telematics to replace environmentally damaging business travel and commuting. The idea sounds logical. But a much deeper understanding of the social and physical contexts of communication is needed if any impact on damaging mobility is to be made. This workshop will focus on the 'World Series' videoconferencing events between Amsterdam and Toronto which coincide with Doors 3.

In many cultures, shared values and laws on the environment are communicated through timeless stories, myths and rituals. How might global information networks foster a better interaction between (highly misnamed) 'developed' cultures and those wiser than our own? The 'Electronic Songlines' workshop will develop scenarios for modern electronic storylines. The 'Eternally Yours' group will be running a workshop on the question of how industry might modify its reliance on the rapid innovation of short-life products. Should we design less desirability into hard products, or make hardware the 'carrier' of infinitely mutable soft attributes? How might we communicate 'time spent' as a value in products, rather than a cost? Could we replace hard status symbols with soft ones, such as wisdom, friendship, care, entertainment, fantasy?

A third group of workshops looks at concepts of community. Take work and 'telework', for example. Behind the rhetoric, the reality of much so-called tele-working is that it is unskilled and isolating. New telework concepts are needed that enhance social contact, which value both mental and physical skills, and which re-evaluate the relationship between work and leisure. What

are the main elements of this agenda? The workshop will focus on one or two live examples of new business concepts. The concept of health, for instance, is changing to encompass social and cultural factors as well as purely bodily ones. In a workshop on 'tele-care', Francois Jegou and the Vormgevingsinstituut's AgeDesign team will consider the consequences of a virtualisation of social relationships. Positive connotations, such as new social connections, may easily be cancelled out by negative ones, such as increased social isolation. How might telematics improve the social connectedness of those (such as older people) whom industrial society, let alone informatic society, has isolated? How many informatics alter current models of 'social service'? The workshop will focus on a specific telematic application for old people. A more focussed workshop will involve a number of environmental organisations which are already sophisticated users of the Internet for communication and organisational purposes. This clinic will evaluate some of these existing network services, propose a range of enhancements, and analyse the skills and tools needed to implement them.

How many people have read Kevin Kelly's Out of Control? This very influential book by one of the editors of Wired magazine looks at the behaviour of all sorts of natural organisations, such as beehives and ant colonies, and makes a comparison between the self-organising capacities of these natural groups and the way that businesses operate. The reason this has been such a powerful book is because in a very imaginative way, Kelly has explained to people in big organisations—governments, corporations—why it is that their lives are so frustrating, why it is that for thirty, forty years, despite all the efforts to write organisational structures that are supposed to make organisations work, people still feel that they are walking up hill. Kelly says that any concept of trying to control a large organism is, by its very nature, doomed to failure. The way that organisms behave is that they organise themselves. Although the book gallops over the last twenty years of the new

physics and the new genetics and the new biology, it nevertheless provides a metaphor and a model for people in the policy business, in the government business, that persuades them that they should stop wasting too much energy trying to organise society according to a master plan; they should actually think differently about the way that they marshall their resources.

It turns out that the big corporations over twenty or thirty years got to this concept of scenario planning—mapping not what the future will be, but three or four variables, stories about what the future might be. I recommend to you the concept of scenarios, stories, as a tool for helping groups of people think about the future. The difference is that we now need to be talking about issues in a way that will change the way in which our lives will evolve. That is why we at the Institute asked, 'What can designers do that other people can't do? What is the core competency for the world of designers?' We decided that designers were competent at taking rather abstract ideas and making them visible and easy to understand, at giving them form. So the core competence of our Institute is the giving of form to ideas which are otherwise rather intangible. Making plans, fantastically complicated statements or directives, is not enough. We have to find a way to connect those two worlds together through scenarios that designers would make visible and tangible, and that by making them so, designers would make it possible for other people to act on them.

The outcome of Doors 3 can be found on the Internet address: http://www.design-inst.n/DOME/

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