Balance-Unbalance/PLYMOUTH. UK

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Abstract

"Our worst fear is not that we are inadequate; our deepest fear is that we are powerful beyond measure." ***Marianne Williamson: Reissue Edition 1996. 'A Return to Love: Reflections on the Principles of a Course in Miracles', Thorsons.***

The aim of this paper is to explore the idea that design can be a catalyst for fundamental/sustainable change and that designers can provide imaginative solutions to the questions surrounding sustainability and the integration of business and the corporate world. Every day new solutions are being found to ensure our survival; but it is more than survival it is about evolution and growth not only in terms of economy but also in terms of us as human beings understanding our development. Design, inventions, realisations, how ever you describe it, are endeavouring to benefit all humanity, this paper will seek to show a few alternative ideas while focusing more on root and branch change for our communities, in education, business and design. Design Matters: Good design works on many levels, functionally, rationally, and aesthetically. It is pleasing to use, to look at and at its best, it makes life easier, safer, slower, faster, it can be amusing, it enhances the experience of the built environment, we all take this as a given in the developed world.

Our failure to realise and appreciate that our planet as a fantastic design, or to act on this thought, is why our efforts are now so concentrated on its survival. It is also our failure to understand ourselves, which has thrown our very existence into jeopardy. Designers have always dealt with conflict, ambiguity, difficulties and diverging requirements. Their job is not to ignore certain aspects or compromise, but to be innovative risk takers in their quest to find solutions. Design has the power to convert difficulties into improvements; good design has the power to connect people emotionally, rationally, and scientifically. That is why it is ideally placed to play a leading role in reshaping our understanding of why and how we need to move forward realistically into the 21st century. Several themes have emerged over the last five years that as Design Educators, Designers and Design Entrepreneurs we have to take into the future, this paper charts these envisaged solutions and offers some alternatives to the status quo.

Keywords

Introduction

Design Uncertain!

> "Good design is inseparable from good quality of life. It is efficient, affordable, sustainable, inclusive and beautiful. It lifts the heart and inspires the mind. We need it now more than ever." (1)
> "The engine of cultural change is the human capacity for creative thought and action." (2)

Designers are the world's great intermediaries, bridging the gap between ideas and actuality. Almost everything we touch, hold, smell, sit on, sleep in, listen to or look at has been designed for us. The list is endless. Design is present in almost every aspect of our lives and we consequently take it for granted. We only become aware of design when it is ineffectual or obstructive, annoying, dysfunctional, awkward or unattractive.

Global developments and an accompanying increase in related ecological and social problems are creating new challenges for designers. They are dealing with conflicts, ambiguities, difficulties and diverging requirements. Their job is not to ignore certain aspects or to compromise, but to be innovative risk takers in their quest to find solutions.

A global revolution in design thinking and a more holistic approach to design education and research could provide imaginative and far-reaching solutions to the issues we are faced with in a rapidly changing world.

This paper will explore the premise that design is being challenged to redefine itself and that designers must assume new roles and commit themselves to developing solutions in order to secure a sustainable future. Good design has the power to connect people emotionally, psychologically, rationally, and scientifically. That is why it is ideally placed to play a leading role in reshaping our understanding of how we will move forward realistically into the 21st century.

How can good design be defined?

In the early 1980's, troubled by concerns that design may be contributing to the world's problems as opposed to providing solutions, the German industrial designer Dieter Rams asked himself the question: is my design good design? He concluded that good design is: innovative, useful, aesthetic, understandable, unobtrusive, honest, durable, thorough, environmentally-friendly, pure and simple. (3)

These basic principles still apply and are relevant in every area of design practise from architecture to computer technology and fashion to finance. Good design is accessible, adaptable and has a very real capacity to instigate and deliver change. It can teach by example, encourage the spread of ideas and foster a holistic approach to problem solving. Design is a means of creating social, cultural, industrial and economic values by merging humanities, science, technology and the arts.

Design and Education

The principal benefit of a broad education in art and design is the enhanced capacity for exercising the imagination. It would not be stretching the point too much to associate the development of imagination with the development of political vision and the role of art and design in citizen education.

Ideally we must commit ourselves to the further education of our youth by encouraging the development of a value system that places emphasis on our global responsibility to build sustainable, human-centered, creative societies.

In 1999, in response to a White Paper On Excellence In Schools, the UK Government commissioned a report on the importance of creativity in education. The result was All Our Futures, a groundbreaking study carried out by the NACCCE (National Advisory Committee on Creative and Cultural Education) chaired by Sir Ken Robinson. It laid the foundations for a national education strategy and argued that by increasing students' creative awareness and abilities we better prepare them for the challenges of a rapidly changing society. In effect, it redesigned our approach to education.

> "In terms of education there is a need 'for minds capable of creating new possibilities' and a necessity to 'transform our current ways of thinking and operating." (4)

For those working in the field of education and Higher Education in particular, the onus is on conveying the skills, values and knowledge required to address the problems posed by environmental, economic and social change. Education for sustainability is increasingly popular and ideas, innovation and networks are growing, both at policy and practice levels. At the same time, design for sustainability is flourishing as a necessary and creative response to new challenges, it is embedded in good practice but there is a need for more real transformative action to take place.

Human-centered design thinking, when rooted in universal and sustainable principles, has the power to fundamentally improve our world. It can deliver economic, ecological, social and cultural benefits, improve our quality of life and create optimism in communities and individuals.

Design and the Built Environment

Another interesting development in 1999 was the formation of CABE (The Commission For Architecture And The Built Environment). A bridge between politicians and the public, the Commission became the government's advisor on architecture, urban design and public space and reviewed over 3,000 development proposals between 1999 and 2011. Eighty-five percent of local authorities in England took advantage of CABE's independent advice service and seventy percent took planning decisions in accordance with that advice.

The Commission proved to be an excellent example of an effective working relationship between government and designers for the benefit of society. Projects ranged from the regeneration of run-down coastal resorts and industrial wastelands to community housing developments and the creation of ecological parks and green infrastructures. The emphasis was on community, inclusion and diversity, design excellence, health and wellbeing, design in education, sustainability and the development of a sense of place.

Figure 1 – IMAGE Derelict East London Warehouse

Education programmes like Engaging Places, were run in conjunction with English Heritage. Children and young people were taught in buildings and open spaces where they could immerse themselves in the social, architectural, and environmental issues relating to their immediate environment.

CABE also launched The Grey to Green campaign which pushed for greater investment in green infrastructure and argued for a shift in public spending from grey projects, like road building and heavy engineering projects, to green schemes that included, tree-planting, eco-parks, green roofs and waterways.

The city of Peterborough (Cambridgeshire, east England) is pursuing an ambition to make itself the environmental capital of Europe. The regional council believes it probably has the largest number of environmental businesses on the continent and the local schools are even preparing children for employment in the town's growing low carbon economy. Marco Cereste, leader of Peterborough Council, sees design as an integral part of re-orientating the town and preparing it for sustainability. Neighbourhood councils are responsible for making key decisions regarding sustainable transport, waste management, energy-efficiency, planning, the promotion of green habitats, bio-diversity and management of open space. It is successfully setting a precedent for the creation of future holistic communities.

> "Changing who makes decisions about what to build and what it should be like could seem risky, creating uncertainty and requiring new ways of thinking and working. For designers this is, in fact, an opportunity. An opportunity to prove the virtues of good design. To contribute to wealth creation as the country gets back on its feet. To listen to people and put them at the heart of their designs. To rediscover the virtues of efficient, low cost design. To get better value for the taxpayer and create greater value for the community and for business." (5)

The role of design in economics and the corporate world

> "The bottom line is back! Deep self-interest, not altruism drives adoption of energy efficiency and "green" strategies as sensible business practice." (6)

Apple Inc., the most valuable technology company in the world and perhaps the most iconic design company of all time, has been criticised for its contractors' labour, environmental and business practice. However, in a recent address to design students at The Royal College Of Art, Apple's multi-award winning industrial designer, Jonathon Ive, placed the emphasis on "new" rather than "better," and warned against churning out products simply in order to survive, with no thought of the impact of such rampant production.

> "It never ceases to amaze me what it takes to develop and bring to mass production a product," he said. "If you don't care, it's just wrong to drag so many resources and so much of people's time through that process." (7)

He also warned against catering to market trends and praised instead authentic and heartfelt commitment to innovation-led culture from within the company. Unless core values and disciplines are acknowledged and embraced by every employee he is sceptical of their success.

The corporate world is also looking to designers for new models to facilitate financial growth from within communities as opposed to external loans and aid packages.

In an introduction to Yale University's School of Management, Ernest Beck outlines the advantages of using real case studies in schools of public policy, business and design.

> "MBA professors will be able to look at the financial, marketing and legal issues of a design-oriented enterprise; design tutors will be able to look at the role of design but will also be able to discuss balance sheets and the role played by investors; and a school of public policy might look at micro-financing for product innovations that facilitate social change." (8)

One particular case study aims at fighting HIV/AIDS and TB epidemics in South Africa. Project Masiluleke a signature program of the PopTech Accelerator, 'a social innovation incubator designed to foster breakthrough solutions to pressing global issues.' The initiative is dependent on the joint efforts of product designers, educators and innovative mobile phone technology. It is a working example of how disparate organisations can interact to benefit society. The scope and scale of these initiatives is unparalleled in history. Manufacturers and marketing companies are challenging the preconceptions of how they are meant to operate by creating goods and services, which have appropriate outcomes in the world.

> "Placing design within the larger context of real world projects and enterprises is critical for design thinking and solutions to evolve as a methodology and a means for social impact." (9)

IMAGE Figure 2 – Project Masiluleke

Design and the Future

In 1973, as the architects Chamberlain, Powell and Bon (followers of Le Corbusier), were watching London's vast Barbican arts centre rise so optimistically from a depressing Luftwaffe crater, the British economist EF Schumacher published his book, Small is Beautiful: A Study Of Economics As If People Mattered. (10)

In 2017 we are contemplating a similar collision of opinion with regards to our stance on environmental and economic concerns and how we can move forward most effectively.

Schumacher believed that 'appropriate technologies' are the best way of addressing the needs of smaller communities because they provide effective solutions whilst taking into consideration the special requirements of the local community.

Schumacher argued that the modern economy was unsustainable. Natural resources (like fossil fuels), were treated as expendable income, when in fact they should be treated as capital, since they are not renewable, and thus subject to eventual depletion.

He further argued that nature's resistance to pollution is limited as well. He concluded that government effort must be concentrated on sustainable development, because relatively minor improvements, for example, technology transfer to Third World countries, will not solve the underlying problem of an unsustainable economy. Schumacher's philosophy is one of *"enoughness,"* appreciating human needs, limitations and appropriate use of technology. It grew out of his study of village-based economics, which he later termed *"Buddhist economics"*.

He faults conventional economic thinking for failing to consider the most appropriate scale for an activity, blasts notions that "growth is good," and that *"bigger is better,"* and questions the appropriateness of using mass production in developing countries, promoting instead *"production by the masses."* Schumacher was one of the first economists to question the appropriateness of using GNP to measure human well-being, emphasising that *"the aim ought to be to obtain the maximum amount of well-being with the minimum amount of consumption."*

IMAGE Figure 3 – An HAPV "Happy Cart"

We have recently seen a proliferation of 'small and beautiful' developments across the Developing World. A great example of low-cost, inspired design solutions for Sub-Saharan communities are "HAPPY" carts, a contemporary twist on HAPVs (Human and Animal Powered Vehicles). The simple addition of solar panels to the humble donkey cart converts the vehicle into an independent, sustainable source of energy that provides multiple benefits for the local community as a means of transport, a water-carrier, mobile phone charger, and convenience store.

Design and the Environment

Can design succeed where science is proving insufficient to generate the will to act effectively on climate change?

Scientists sound increasingly desperate as the evidence they are carefully accumulating stacks up but fails to prompt the urgency they insist it requires. Some schools of thought even

deny that climate change and global warming are a problem. Our press seems only to create a panicked paralysis: a language of probabilities, statistics and numbers, which fail to ignite the public imagination.

Is this where designers have to step in to prompt understanding, to challenge what is taken for granted, to turn ideas upside down?

The earth's rapacious consumption of energy is predicted to double by 2050…. but all human activity for a whole year could be powered by the energy contained in the sunlight hitting the Earth in just one hour.

The untapped potential for using the sun's rays is huge. Harnessing even a small amount of this to make electricity or useful fuels could satisfy the world's increasing need for energy without further endangering the climate.

Instead of burning the earth beneath our feet we can invest as China has; it already makes most of the world's solar panels and wind turbines. Its carmakers, such as BYD, are pushing ahead faster than established Japanese and American rivals to mass-produce electric vehicles. Its carbon captures technology and high-efficiency "ultra supercritical" coal plants are close to the global cutting edge. With the new package, the government will commit itself to developing domestic markets for these "sunrise" industries.

Obviously political decisions can be made fairly swiftly but nonetheless its staggeringly impressive.

Too often we think of carbon dioxide as just another scalar quantity, often measured in tonnes. We breathe in 10 tonnes of air a week but what does that mean? Fundamental quantities such as acceleration, weight, and force are vector and not scalar combining magnitude with direction. As designers we need to combine and emphasise this extra dimension to give a stronger meaning to the concept of the carbon footprint so that it will have more of a fundamental impact on our lifestyles. James Woudhuysen, Professor of Forecasting and Innovation at De Montfort University, Leicester, gives his perspective on Britain's role.

> "Yes, Britain – the nation that, across the Channel, is widely ridiculed as the Dirty Man of Europe – should set the world an example in cleanliness and hygiene. Red-white-and-blue peace UK insists that, 'as the country most culpable for initiating the first coal age, which is largely responsible for the global warming we are currently experiencing, Britain undoubtedly has a responsibility to take a lead in developing practical solutions to solve the climate crisis'. Greenpeace and others hope in particular that Britain can show the way to allegedly dirty nations like China or India." (11)

He goes on to say:

> "For many environmentalists, 'clean coal' is a contradiction in terms. Although this judgment is overhasty, there is certainly a long way to go before coal-fired electricity generation is made free of all pollutants – including CO2. However, if anyone is making progress toward cleaner coal, it is the Chinese."

So can design continue to work more directly with consumers so that together they can evolve 'mindsets' that encourage new behaviour types and lifestyles?

Edwin Datschefski, a great advocate in the design of sustainable products continues to promote a micro awareness rather than the macro 'Greenwash'. As he puts it ……

> "Large well meaning corporations fail to package and communicate meaningfully. And with all this bombardment entwined with guilt it is easy to slip into 'carbon compliancy."

He says:

> "For example, people think "I cook my potatoes more efficiently now in the microwave, so it's OK to still run my old 4x4", or "Yes I'm flying to Australia but I only boil as much as I need in my kettle."

Other people recognise that small improvements don't make much difference and use that as a reason to justify doing nothing at all. Consumers need to know how their biggest carbon emissions are created and take effective action and also that they are not alone in making changes, as they say in France " l'union fait la force".

One of the first true multi-tasking products on the market was an alarm clock that also played the radio and if you were so inclined it made you a cup of tea!! It seems somewhat antiquated compared to the functionality of the latest mobile phones.

History has shown that man's appetite for development and the need to solve problems and create new ones is absolute. New smart products and design experiences are continuing to develop at a phenomenal rate. Applications for mobile phones are a case in point. New technology has now made it possible for us to monitor everything from air quality and weather forecasts to our personal health, lifestyle and finance by simply touching a phone screen. Perhaps we could introduce an application that will keep tabs on our carbon footprint and the money saved could be invested in low-cost design initiatives for the Developing World.

We can either *create* assets for the future or *take* the assets of the future. One is called restoration and the other exploitation.

Design at the Forefront of Global Change

> "It's not about the world of design but the design of the world." (12)

In recent years we have seen the rise of a new breed of designer. The focus is shifting from materialistic and aesthetic prerogatives driven by consumerism to values which are philosophical, intellectual and more altruistic. A paradigm shift from material-driven consumption towards a greater connection with human centered design and new technology development is underway.

An era of "cultural productivity" has commenced where the importance attributed to modes of life, values and symbols may be greater than that attributed to physical products. New Design Thinking stands steadfastly at the centre of this development whilst simultaneously acknowledging the importance of cultural traditions and the need to rediscover and revitalise them. Emily Pilloton, Founder and Executive Director of Project H Design, USA, is an exponent of the need to educate our young in new design thinking.

> "Our focus on K-12 education is rooted in the belief that design is not just about products or beautiful spaces, but a way of thinking, and that this creative critical thinking is a valuable problem-solving skill to be learned at a young age. We don't just deliver design solutions FOR education, we hope to instill design thinking in the minds of young citizens, so that they may be better equipped to take on the next generation of global issues. Such initiatives are focused on improving the lowest-opportunity K-12 public schools and districts in the US." (13*)*

Thinkpublic is a social design agency founded in 2004 by Deborah Szebeko after she worked as a volunteer project manager at Great Ormond Street Children's Hospital where she experienced the huge impact that design can have on improving the patient experience. The organization has now grown to include programmers, marketers, film-makers, artists and anthropologists and some of their most successful work has been carried out in the field of mental health.

> "This was the first service for the Alzheimer's Society that focused on people with dementia. It was a wave of change that was happening, coming in contact with thinkpublic was good timing. The skills and tools of the designers have helped us make this change." (14)

There is a global shift amongst many design practitioners towards a design philosophy that is rooted in education, altruism and therapeutic change, helping communities to empower themselves through self-help and education projects driven by design initiatives. These are basic principals and we should listen to them, update them and apply them to a new design ethos based on humanity's willingness to restore, redress, reform, rebuild, recover, re-imagine, and reconsider.

A good example of this is The Massive Change Project, a multidisciplinary collaboration founded by Canadian designer Bruce Mau and the Institute Without Boundaries with the aim of maximizing the potential of design to benefit humanity.

> "Surveying the world we found hundreds of examples where visionaries were using design to effect positive change in the world. We called this pattern Massive Change."

> "Design has emerged as one of the world's most powerful forces. It has placed us at the beginning of a new, unprecedented period of human possibility, where all economies and ecologies are becoming global, relational, and interconnected." (15)

Touch Points for a New Era in Design

IMAGE fig 4. Lisbon

We need to move away from Futures and Options and attempt to develop a Future with Options. We need to look at the past, embrace the present and have faith in the fact that design and creativity are capable of instigating change.

We need to recognise that the primary principals of the modernist story have failed in terms of product design, by simply ascribing primary value to utility and style, but what needs to be regained is the pragmatically useful and the socially viable. How will we achieve this?

Perhaps it is time for designers to become educators instead of facilitators. Technology has made it possible for designers, producers and consumers to interact at an unprecedented level. Now is the time for designers to come out of the shadows in order to play a bigger and more responsible role across all design disciplines.

Time to share skills, initiate debate and to appreciate our potential as activists on the frontline of a consumer revolution.

We need enthusiasm most certainly if we want change, and it will come at a price, but perhaps a price we should be prepared to pay. Whether acting as individuals, employees, creatives, creators or critics we have the opportunity to contribute to our future and that of the people who, quite literally, put their future in our hands.

PQD: 2017

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